



Editorial

Well where did that summer go! No sooner do I seem to have put the last issue of *Parnassia* to bed, than here I am again, with barely any of the planned botanical activities for this season carried out.

One of the main reasons for some of my cancelled activities, was the devastating outbreak of foot and mouth disease that has hit our countryside this year. This curtailed my planned surveying of meadowland on the Wirral, as well as assisting with the surveying of Thurstaston Hill, which is grazed in parts by sheep. Nevertheless, It seems that with a little bit of careful planning and thoughtfulness, a fairly full season of field trips has still gone ahead.

On a recent trip to Cumbria, our minor inconveniences were well and truly put into perspective. All footpaths in the area where I was staying were still closed, the disinfectant mats were still much in evidence once one left the major roads and the fields lay still and empty, in a funereal silence that could have been construed as peaceful, if not for the tragic underlying circumstances behind this sorry scene.

One particular site that I visited, an animal centre aimed at family visitors, had alone had to slaughter 7000 animals, in order to open its doors to the public. This stock of rare breeds of sheep, cattle and pigs had taken many years and much expense and dedication to build up. The proprietors were amazingly still in business, thanks largely to their stock of birds of prey, small pets and various exotic animals.

Let's hope this epidemic will soon come to an end, and perhaps we can learn from our mistakes and move forward to a brighter future.

To finish on a lighter note, I hope those of you who managed to get on this summer's field trips, had a good time and I'm sure all members will look forward to reading the reports when they appear in next Spring's issue of *Parnassia*. Like myself, many members are unable to attend these field trips, due to work, family and a host of other commitments, but let me assure all leaders that the interest in these trips is very great. Keep up the good work!

Finally, I'll stop rabbiting on, by acknowledging all those who help in the production of this newsletter. Namely Alan Atherton, Jan Hatton, Gill Haynes and Sally Thompson at Ness and Wendy Atkinson and Donna Young at the Museum. Thanks for the help!

I'll hopefully catch up with some of you at the indoor meetings this winter.

Keith Hatton
September 2001

Liverpool Museum News

Welcome to another update of "Museum News".

Firstly, let me introduce myself, I'm Wendy Atkinson, Assistant Curator of Botany at Liverpool Museum. After studying botany at Bangor and plant taxonomy at Reading University, I have worked on various part-time and voluntary jobs, including a summer of



botanical surveying in SW Ireland with our own Leander Wolstenholme! I was at the RHS gardens Wisley, and at Haslemere Museum before arriving in Liverpool for a part-time, temporary position to cover Donna Young's maternity leave.

Almost two years later I'm still here (now permanent and full-time) and thought it was about time I introduced myself! For those of you who don't already know, I have also just taken on the task of secretary of the LBS as Vera stepped down at the AGM in January. I'm looking forward to getting to know more of you as the year goes on and hope to be getting out in the field more often.

Back to the Museum.....

Work is progressing down at William Brown Street. We have had some delays but we look forward to being back in the museum and working on the collections soon. This means that Donna and myself are still camped out at a warehouse out of town with the collections, but we have done a great deal of preparatory work for the move back to LM. We have spent 5 months packing up the library and the collections into boxes which are now stacked onto pallets, sealed in plastic and stored on racking. A 47ft long freezer trailer was hired and we spent a further 3 months freezing the pallets. This was done to kill off any potential insect pests before the return to the new sterile botany area at LM. The result is that we now look more like an IKEA warehouse than a botany department! A big concern for us is the length of time that the collections have been, and will remain, inaccessible. We hope to start the move back to the museum in December and will be in

place by spring 2002, so long as there is no more slippage with the building works.

There have also been changes in the Museum with regards to botany staff. In Oct. 2000 a new Science department was formed - Collections Management & Research (Science), to give it its full title! This now encompasses the old departments of Botany, Zoology and Geology, which are now sections within this dept., and John Edmondson is now the Head of Science. Angus Gunn too has moved on to be the head of another new dept. called "Collections Access". This dept. deals with the front of house activities such as the Aquarium, Planetarium, Natural History Centre, and the new Bug House, Infoworld and Treasure House. Judith Riley has also recently taken up a new position as Planetarium lecturer. In view of this, I am now taking over Judith's role as museum contact, and I'm sure everyone will join me in thanking Judith for all her time and effort which she has put into the LBS over the last few years. This leaves only Leander, Donna and myself in Botany, along with Claire Sedgwick who works on the Linnean Society's collections and continues as our Hon. Librarian.

Once we are up and running in the museum, I hope to give a guided tour of the new Botany area. Until then, I hope you will all come along to the indoor meetings in the autumn. Finally, may I just say that any offers to lead field meetings or give a talk would be gratefully appreciated!! Please feel free to contact me on 0151 955 0813.

Wendy Atkinson
September 2001



News from Ness Gardens

You may recall Keith Hatton's article- 'Luronium natans at Ness' (*Parnassia*, spring 2001). Since then, Keith and I have been searching the darkest depths of the Rochdale and Huddersfield Narrow canals in order to locate the U.K. and European rarity, with permission of English Nature, of course.

The sites on the Huddersfield Canal proved somewhat difficult to find, not least because of the town's one way system, but also deciphering local dialects. –

"Can you tell us where Low West Wood Mill pond is, please?"

"Oh, Tha means Scraggy pond."

Luckily, that exchange being with the local water bailiff or we would never have found the sad, reed choked pond, which for some reason seemed to be the last resting place of an assortment of abandoned musical instruments!

The University's School Of Biological Sciences, Ness has agreed a contract with British Waterways (Pennine Ring section) to grow *Luronium natans* during their canal restoration programme. The plants are removed from various sites during dredging. Once the material arrives at Ness, it is divided into small clumps, these are planted into sterilised loam, on hessian sacking in seed trays which are then submerged in 48 fibreglass tanks, recently vacated upon conclusion of a Global warming experiment.

The *Luronium natans* will be grown on in our tanks for six months, and then be transplanted back to their proper

home with the sacking still in situ, this being biodegradable.

Luronium natans is an opportunist, growing on newly dredged canal beds and in some upland lakes in Wales and the Lake District, the main factor limiting its distribution, being its inability to compete strongly with more vigorous aquatics. The flowers of the canal populations appear to be sterile, although this is not the case with the Irish populations that we have. However, propagation by vegetative runners seems most successful, a property seen in the wild where plantlets break off during strong currents, and readily form new colonies downstream.



Ann Hudson

Floating Water-plantain, *Luronium natans*

We have also received samples from Galway, Ireland and from four different sites in France, as well as specimens from Derwentwater in The Lake District. Preliminary genetic analysis indicates that the Rochdale and Huddersfield populations are one distinct group with quite a high genetic diversity within the group, whereas the



Irish plants, not surprisingly appear to be a different genetic group. Further work is still to be done on the rest of our collection, though this will be delayed for the time being, until we have gathered more material from different areas.

Our longer-term plans with British Waterways involve the construction of a 'mock' canal with lock gates and sectional viewing feature. *Luronium natans* will be grown here, on a permanent basis along with other marginals and scarce plants such as Water-starfruit, *Damasonium alisma*, and American pondweed, *Potamogeton epihydrus*. We also have plans to house the National *Callitriche* collection, once work has finished on the currently being prepared monograph of this difficult to identify species.

Alan Atherton.
September 2001

Local News

New Address for B.S.B.I. Recorder

The VC59 Recorder has changed address to:-

Mr. D. P. Earl
Caretakers House
2a Ash Street
Southport
PR8 6JH

Tel: (01704) 540337

V.C. News

Significant progress continues to be made with vascular plant recording in South Lancashire VC59.

Thanks to the dedicated work of my predecessors Peter Gateley and Vera Gordon all the 10km square records for VC59 have been submitted and carefully checked for the Atlas 2000 project. The Atlas and the accompanying CD-ROMs should be available soon.

Now that the Atlas 2000 work has been completed the main objective is that of ensuring that an adequate level of recording is carried out within all the VC59 tetrads for the New Flora of South Lancashire before the proposed cut off point of the end of 2003. In order to try and meet this objective a VC59 tetrad totals spreadsheet has been compiled by D.P. Earl & H. McGhie which effectively maps the tetrad totals obtained so far (see table on page 5). The data has been obtained from the totals submitted by members of the recording team and from an additional spreadsheet listing all the plant records entered onto Recorder so far being produced by Dr. John Lowell from a backup copy of the Recorder database. It is inevitable that the data on the VC59 tetrad totals table will not be completely accurate but the table does to some degree give a good indication of which tetrads require intensive recording. Any tetrads with totals of less than 50 species are key targets for the 2002 season of recording. Of course in some cases such as areas of salt marsh or extensive moorland species diversity may be very low but the key objective for 2002





will be to see that most tetrads with totals of less than 50 species have received at least one intensive recording session.

Looking further ahead to the final year 2003 an analysis of species distribution will be carried out. For example if it is found that there are no records of Lesser Celandine, *Ranunculus ficaria* from a tetrad where woodlands are well represented, why is this? Obviously there would be a need for a springtime visit to the tetrad and it is likely that a significant number of new records for the tetrad would be obtained from the visit.

Looking back at this years recording we do have some very interesting records for the local area.

On the LBS meeting at Warrington, Bithynian Vetch, *Vicia bithynica*, was found at a location close to the Mersey (specimen of this species has been donated to Manchester Museum by Julie Clarke).

The wild flower society meeting held on the Sefton coast helped to clarify the status of Knotted Clover, *Trifolium striatum*. This plant appears to be increasing and is now known to occur in 5 tetrads in sandy turf and lawns in the Southport district and on a grass verge on the Altcar Mosses (V. Gordon).

Henry McGhie, together with Mike Whittam, monitored the good population (103 spikes) of Ivy Broomrape, *Orobancha hederarum* at Calderstones Park, Liverpool.

Susan Taylor informs us of a second site at Freshfield for Common

Cudweed, *Filago vulgaris* whilst I managed to find a third site at a quarry near Parbold.

There are also some additional records for Distant Sedge, *Carex distans* from dune slacks and salt marshes between Birkdale and Marshside sand works.



Knotted Clover, *Trifolium striatum*

Interesting records from Vera Gordon this year include *Trifolium echinatum* and *T. aureum* at Little Crosby, *Clematis orientalis* at Waterloo (new to VC59) and a fourth population for *Crithmum maritimum* at Crosby. The *Crithmum* plants are in danger of being engulfed by wind blown sand indicating how important it is to monitor the populations of rare plants in VC59.

Finally attention is drawn to the North Merseyside Biodiversity Action Plans launch recently held at Hope University. It is now possible to view the plans from the internet. More information can be obtained by visiting the Action Plans website www.ukbap.org.uk/plans. Once at the web address select England, then



Northwest. A list is then produced of all the local action plans in North Merseyside, Lancashire etc. There are action plans for a variety of habitats and plant species including Isle of Man Cabbage, Purple Fumitory and Early Sand grass. These plans are of tremendous importance to the conservation of the biodiversity of the region and therefore are essential reading for local botanists.

Progress is also being made with the study of historical recording, including the discovery of specimens of Narrow-leaved Bitter-cress, *Cardamine impatiens* at Calderstones Park, Liverpool collected by S.D. Manning and part of A.J. Farmer's herbarium.

Dave Earl

Evening Meeting Reports

Holiday Exhibits November 14th 2000

A good start to the holiday exhibit meeting was made by Judith Riley who showed a selection of enlarged photos taken during a 3 week holiday in Malaysia. They were of widespread plants of tropical areas with tree ferns and pitcher plants, dense forests and tropical scenes. Among other exhibits were 2 books which we were able to look at later.

Mr. Greenwood had been checking some of his old records of rare plants of West Lancashire VC60 to record any changes. Where the habitat had not altered, plants such as Parsley fern, *Cryptogramma crispum* were still there but bog erosion had affected other species like Cloudberry, *Rubus*

chamaemorus and Fir Clubmoss, *Huperzia selago*. Plants on The Lancashire Canal had altered a bit due to seepage from fields etc. but he was pleased to find Lesser Skullcap, *Scutellaria minor* still in the vice county. He had also visited some other ground at Manchester Airport which had been churned up 2 years previously and now had a good covering of species obviously from disturbed dormant seeds.



Lesser Skullcap, *Scutellaria minor*

Tom Smales showed a selection of slides taken on field meetings. Peter Gateley showed slides taken on Pen-y-Ghent, which included Spring Sandwort, *Minuartia verna*, Roseroot, *Sedum rosea* and Green Spleenwort, *Asplenium viride*. Views and plants, taken in the Western Highlands in July included clumps of Diapensia, *Diapensia lapponica* with one flower still out at Glenfinnan. We also saw Northern Rock-cress, *Arabis petraea*, Oak Fern, *Gymnocarpium dryopteris*



and Starry Saxifrage, *Saxifraga stellaris*.

Miss Gordon's contributions were views and plants of the northern Sahara in Morocco in March and some of Norway in August.

Vera Gordon

**A New Look At Large Yellow-sedge, *Carex flava*
December 12th 2000**

Dr. Paul Ashton gave an illustrated talk entitled "A new look at *Carex flava* in Britain" He began by telling us that the genus *Carex*, was one of 83 genera in the Sedge family *Cyperaceae*, and described the sub-genera that *Carex* was divided into. Photos of Roudsea wood in Westmoreland, the classical locality for Large Yellow-sedge, *Carex flava* in Britain, were shown. Here, it grew in four distinct habitats, which had to be carefully managed.



Large Yellow-sedge, *Carex flava*

Taxonomically, *Carex flava*'s close relations are very interesting and over

the years have varied in their classification from species to subspecies and hybrids. Drawings and photos of the plants *Carex flava*, Yellow-sedge, *C. viridula* with its subspecies *ssp. brachyrrhyncha*, *ssp. oedocarpa*, *ssp. viridula* and *var. pulchella* were shown.

We were told that in 1983 *Carex flava* found at Malham Tarn was later identified as *C. jemtlandica* but morphometric analysis of parts of the flowers and fruits indicated that these plants were found to be nearer to *C. flava* than any hybrid or subspecies.

Vera Gordon

**Annual General Meeting
January 9th 2001**

The President Mr. Greenwood was in the chair and 21 members were present. The Hon. Secretary's annual report summarising membership details, indoor and field meetings held during the year was presented. Its adoption was proposed by Peter Gateley and seconded by Dr. Gunn.

The Hon. Treasurer, Mr. Lockwood presented the balance sheet and summary of accounts duly audited by Miss Bentley and Miss Davis. Copies were handed out and the items fully explained. The accumulated fund had risen from £3900 at the end of 1999 to £4077. Adoption of the report was proposed by Eric Greenwood and seconded by Peter Tipping. Mr. Lockwood then told of the difficulty in getting the amount of interest from the National Savings Bank and in the end he had to estimate it in time for the auditors. The figure came a few hours



before the AGM and the estimated amount was only 80 pence out.

After a short discussion it was decided to hold the AGM in February in future years.

A donation to Plantlife that had been proposed and carried at the last AGM was agreed to. An annual subscription will now be sent to Plantlife.

Mr. Lockwood had sent 25 letters to members who had not paid their subscription for 2 years but only 7 had replied.

Judith Riley read out the Hon. Librarian's report. The LBS library books are at present packed ready for a freezing process before moving into the proposed site in the Botany meeting room in the basement of the Mountford building at Liverpool Museum.

Election of Officers followed: -

President	Eric Greenwood
Vice-President	Peter Gateley
Hon. Secretary	Vera Gordon handed in her resignation after 60 years service and a volunteer was requested to fill the post
Hon. Treasurer	Douglas Lockwood
Hon. Librarian	Claire Sedgwick
Hon Editor	Keith Hatton
Council Members	J. Bentley J. Davis V.Gordon J.Edmondson K. Hatton P.Lockwood D. Messenger T. Smale P. Tipping

The auditors would be appointed at the Jan. 2002 meeting.

Mr Peter Gateley proposed that Miss Vera Gordon be made an Honorary Member , which was carried with acclamation.

Members then recalled some of the field meetings with specimens and slides.

Miss Gordon showed 2 *Elaeagnus* species seen at three recent meetings. Spreading Oleaster, *E. umbellata* from Knotty Ash, Broad-leaved Oleaster, *E. macrophylla* from Southport and a few cultivated species. A pressed specimen of a twig from a 7ft Cut-leaved Teasel, *Dipsacus laciniatus* was also shown. Other slides recalled meetings at Caergwrle, Gathurst, Gatebarrow and Stanlow Island.

Mr Gateley's slides were of Tortoise and Long-horned Beetles on field thistles and many Soldier Beetles on the umbel flowers of Hogweed

Leander Wolstenholme showed slides of the Lemon-scented Fern *Oreopteris limbosperma* and Pipewort, *Eriocaulon aquaticum* from the West of Ireland.

Vera Gordon

Finland and the Baltic Coast 13th February 2001

Eric Greenwood was in the chair and 19 members were present. The evening's talk was given by Dr. George Russell.

Dr. Russell explained that he would start off by looking at flowering plants and then move on to seaweeds. We



were treated to a wealth of slides and information on the plants and people of the area. He showed slides of the coastline of Norway where the arctic tundra has plants such as Grass-of-Parnassus, *Parnassia palustris* and Mountain Avens, *Dryas octopetala*, which grow right down to the sea level. Here too, Dwarf Birch, *Betula nana* and Silver Birch, *B. pendula* hybridise to produce plants with orange leaves in autumn from which it is possible to calculate their ancestry. South of this arctic region are the boreal forests where Pines, *Pinus spp.* and Spruces, *Picea spp.* grow and landowners have to replant after felling. In the cleared areas weeds such as Rosebay Willowherb, *Chamerion angustifolium* and Yellow Loosestrife, *Lysimachia vulgaris* grow.

Dr. Russell proceeded to show flowering plants through the seasons starting with the spring flora in Finland. The first plant to appear is Liverleaf, *Hepatica nobilis* and as spring explodes, flowers such as the Wood Anemone, *Anemone nemorosa* and Cowslip, *Primula veris* come into flower. Dr. Russell explained that Finland is a bilingual country, and along the Baltic coast there are many Swedish speakers. May Day is still celebrated with the lighting of bonfires.

As we headed into midsummer, the plant commonly known as the 'Flag of Sweden', *Melampyrum nemorosum* comes into flower along with a host of other plants such as: Dandelions, *Taraxacum spp.*, Bellflowers, *Campanula spp.*, the Dog-rose, *Rosa canina*, Meadow Saxifrage, *Saxifraga granulata*, Wild Pansy, *Viola tricolor*, and Yellow Loosestrife, *Lysimachia*

vulgaris, which all make for a colourful display.



Meadow Saxifrage, *Saxifraga granulata*

Through autumn and into winter there were slides of migrating birds and the Alder forests. Berries begin to ripen. Wild Strawberry, *Fragaria vesca*, Raspberry, *Rubus idaeus*, Common Juniper, *Juniperus communis*, and a favourite of the Finns, the Cowberry, *Vaccinium vitis-idaea*, were all shown, as were Black Currant, *Ribes nigrum*, which only became common after the war

Dr. Russell then went on to talk about the marine habitat and his concerns for it. The Finnish archipelago is made up of many islands or 'skerries'. These skerries get very dry in summer and are home to plants such as Chives, *Allium schoenoprasum*, Biting stonecrop, *Sedum acre* and in damper areas Purple-loosestrife, *Lythrum salicaria*. Finland's coast is still rising and as it does so, rock pools are lifted up on the shore. As they dry out a zonation pattern emerges in the flora starting with species such as the thin,



delicate green algae, *Enteromorpha intestinalis*, growing in the rock pools. As one goes higher up the shore, mosses begin to colonise and these are succeeded by Bur-reeds, *Sparganium ssp.*, Rushes, *Juncus spp.*, and finally seedling Pines. The area around the Baltic Sea has a curious flora with a mix of algae and flowering plants growing together. Those commonly found include the green algae, *Cladophora glomerata* and the brown algae, Bladderwrack, *Fucus vesiculosus*, with its distinctive air bladders. Growing alongside the algae are flowering plants such as Brackish Water-crowfoot, *Ranunculus baudottii*, and Marsh Arrowgrass, *Triglochin palustre*. This is most likely due to the geological and glacial history of the area. As the ice retreated, a lake, the Baltic Ice Lake was formed and as the ice disappeared and land levels rose the lake was closed off. However, mud cores reveal that 7500 years ago a link to the sea was re-established and the sea flooded back in. This had the effect of turning the sea warmer and saltier with the effect that marine species reappeared. Over the past ca. 3000 years, however, the Baltic has become colder and less saline making it more stressful for marine plants and animals.

Studies have been carried out to see what the effect is of different salinity conditions on the growth and reproduction of the seaweeds using, Bladderwrack, *Fucus vesiculosus* and the filamentous brown algae *Pilayella littoralis* from the Baltic coast and the Irish Sea. These two areas have different saline conditions with the seas around the British Isles generally being around 35ppt (parts per thousand) salinity as opposed to 6ppt in Finland. Results showed that the

Irish Sea material grew best at 12-34 ppt salinity and that the lower the salinity conditions, the less the growth rates. The Baltic Sea material showed good results at low salinities including 1.5ppt which was lethal to Irish Sea plants. The marine algae that have survived have undergone some small evolutionary shift into various 'ecotypes', which are adapted to salinity conditions. The brown seaweed, *Fucus serratus*, from the Baltic Sea has recently been shown to have a different genetic make-up to local populations from elsewhere.



Marsh Arrowgrass, *Triglochin palustre*

Studies were also made on the growth of the reproductive receptacles. The bitterly cold winters in the Baltic keep reproductive development till later in the season and ensure a short, compact reproductive season. However, in the 1990's there were no bad winters. Researchers went back to see if climate change was taking place, and the effect this would have on the growth and reproduction of *Fucus serratus*. They found that in 1983/84 there was a 3 month winter dormancy period, which has since dropped to only a 6 week period in 1999/2000, possibly due to the rise in sea temperatures in that region.

Wendy Atkinson



Articles

Ann Hudson.

Botanical Artists at Ness

The art group at Ness Botanic Gardens was formed ten years ago in January 1991 and has achieved to date two Royal Horticultural Society medals: a Silver-gilt for their Collection of paintings of plants at Ness collected in China by George Forrest and Frank Kingdon-Ward, a Silver Medal December 2000 for their Collection of *Rhododendron* Subsection *Maddenia*. They are currently working on a Collection of Rare Plants & Endangered Species for presentation to the RHS next Season and on an exhibition at Ness.

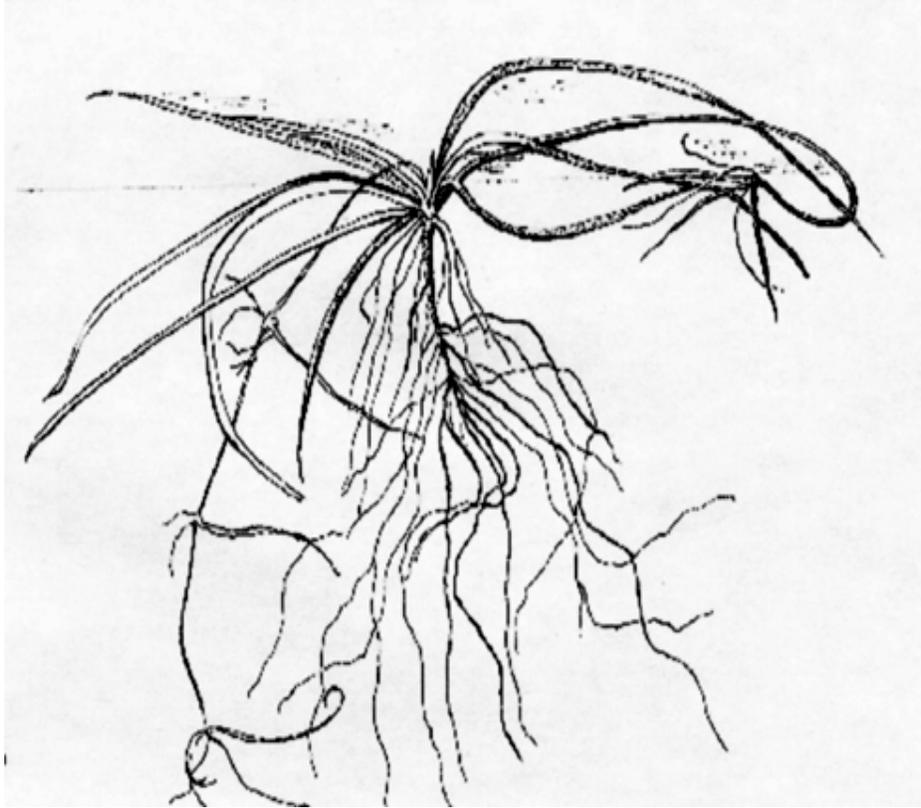
Art Courses take place at Ness throughout the Season, day courses once a month, a 3 day weekend course in Spring, a 4 day summer school and a visiting tutor weekend prior to the two week Annual Exhibition. The tutors who have visited Ness Botanic Gardens are Annie Farrer, tutor to Kew and Rhienhild Raistrick tutor to Cambridge Botanic Gardens.

Our resident tutors are Josephine Hague-International Large Gold Medallist, Kay Rees-Davies-Gold Medalist, and Julie Small-Gold Medalist 2000-pencil work.

We aim to share the delight and pleasure in our paintings of plants with the help and support of the scientists, botanists and Staff at Ness Botanic Gardens.

Botanical Artists of Ness Botanic Gardens,
Arts Organiser,
Tel. 0151 336 2281
E-mail hud.mole@virgin.net

Editor's Note! The above group have very kindly prepared a series of drawings especially for Parnassia. To give the drawings their best possible setting within the confines of our publication, I have devoted the next 3 pages solely to their work. I'm sure you'll agree with me that their work is well and truly deserving of this extra space.



Floating Water-plantain, *Luronium natans* (Rochdale Canal) by Ann Hudson

This picture demonstrates the isoetid growth form of *Luronium natans* and is part of a larger work on the plant that is still in preparation. Hopefully we will be able to display the completed work in the next issue of *Parnassia*.





Water Starfruit, *Damasonium alisma* (Surrey) by Gillian Dudley-Smith





Juncus effusus x balticus (Ainsdale) by Vicky Marsh



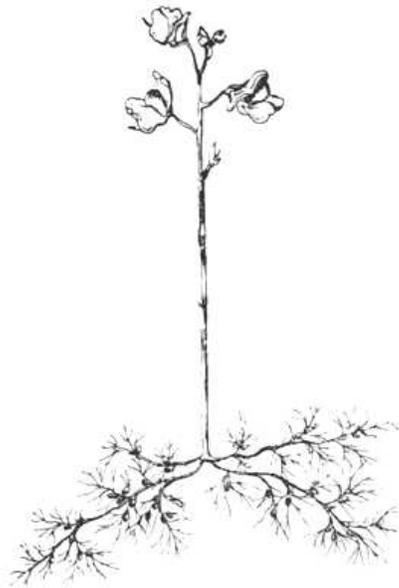


'Red Data Book' Plants at Ness

As you may remember from the last issue of *Parnassia*, I spoke of one of the aims of the School of Biological Sciences at Ness Botanic Gardens being the development of research into 'red-data book' species. It seems as though, this piece was not only read by L.B.S. members, but also by the plants themselves! As well as almost accidentally stumbling across certain red data plants in my various travels around the countryside, the plants are now even starting to make their own way here, as though they have heard of a safe refuge.

Several incidents have occurred this season, which lead me to this somewhat surprising conclusion. Whilst we have been working on Floating Water-plantain, *Luronium natans*, it is perhaps not too surprising that in amongst our canal populations that have been collected in the Rochdale Canal, we have also found a few hitch-hikers, noticeably American Pondweed, *Potamogeton epihydrus*. This is not surprising as the only two locations for this plant in Europe are South Uist in the Outer Hebrides and parts of the Rochdale canal, where it grows by the output pipe of a chemical factory. The plant is classified as of vulnerable status¹ and the canal populations are presumed to be introductions, though nobody seems to have any idea about how they actually got there. We were therefore delighted to receive this unexpected visitor, and the tantalisingly tempting thought of a trip to South Uist to visit its only European relative is rattling around my brain, (purely in the interest of Science, you understand).

Other interesting aquatics, that have hitched a ride along with our collections include Opposite-leaved Pondweed, *Groenlandia densa*, Small Pondweed, *Potamogeton berchtoldii*, Greater Bladderwort, *Utricularia vulgaris* and the aquatic liverwort, *Riccia fluitans*. Although none of these are classed as red data species I am sure we can find a home for them.



Greater Bladderwort, *Utricularia vulgaris*

On to dry land now, and the next red data plant to catch my attention again happened purely by chance. Whilst waiting outside of The Queen's Medical School in Nottingham in order to give my wife a lift, I decided it was such a warm day that it would be far more pleasant to sit on a grass verge rather than wait inside a stifling car. I am sure that many of you know, however, that such an innocent way of passing the time does not exist for those with a botanical mind. No sooner had I sat down, than I started to



identify whatever I could see growing in the closely mown sward. A circle of darker green vegetation quickly captured my attention, which on closer inspection turned out to obviously be a mint. My first inclination was that it was a specimen of Pennyroyal, *Mentha pulegium*, though as it had been surviving in closely mown turf, I could not immediately be certain as not only was the plant flowerless, the act of mowing can induce a variety of unusual growth habits in those plants that can survive such treatment. However, a cutting was taken, and grown on back at Ness, and the identification has now been confirmed.

Mentha pulegium has a vulnerable status in Britain, although it is classified as not threatened in Europe. In Britain the population has dwindled dramatically with one of its traditional habitats said to be ‘... found within traditionally managed lowland village greens, settlement-edge lawns adjacent to open heath, and the verges of unmetalled trackways....’,². However it is recorded as occurring as a grass seed contaminant, with these plants being of probable continental origin. I suspect that this specimen falls into this latter category.

The discovery that took me most by surprise however, occurred back at Ness. On land that had been excavated 2 years ago to create a stream through some woodland, I came across a plant that I had never seen before, growing on the spoil that had been removed from the ditch and used to create a bank side. The plant turned out to be yet another red data species, Balm-leaved Figwort, *Scrophularia scorodonia* and how it came to be growing at Ness has got me totally

baffled despite a fair deal of detective work.

Officially this plant has the classification: Lower Risk – Nationally Scarce with a European status of not threatened – near endemic. It has a western oceanic distribution, and in Britain occurs as a presumed native throughout Devon, Cornwall and the Scilly Isles in fact the plant does appear to be spreading northwards and westwards, and would perhaps not qualify for inclusion in the next edition of the red data book. .

According to Meredith³, it ‘ occurs in Coastal or near coastal habitats... often in the vicinity of old ports and estuaries.’ The Dee side site fits all of these typical conditions, though it has never been recorded further north than mid-Wales before, and all records north of its Southwestern peninsular stronghold are considered to be non-native in origin.

Obviously, the location of the site on land alongside a Botanic Garden of some 100 years standing, will throw serious doubt on any claim for nativeness. There cannot be many places where the traffic in plant material is much higher, but the area of land is away from the cultivated area of the garden, in woodland that was established c.1910, alongside a stream following what is I believe an ancient boundary and hedgerow.

Despite scrupulous investigation into this appearance, I don’t suppose we will ever know the true origin of this specific plant. The plant does appear to be extending its range. Could it be a good global warming indicator plant? Or is it some remnant of somebody’s



long forgotten travels? I guess we can seldom truly know with any particular plant observation we make, we often have to take make do with our 'best guess'.

Keith Hatton

References:

1. *Potamogeton epihydrus*, C.D.Preston, adapted from an account in Preston & Croft (1997), British Red Data Books 1 Vascular plants 3rd edition Joint Nature Conservation Committee. 1999. P.298
2. *Mentha pulegium*, C.Chatters, in Stewart *et al* (1994), British Red Data Books 1 Vascular plants 3rd edition Joint Nature Conservation Committee. 1999. P.244-245.
3. *Scrophularia scorodonia* H.H.Meredith, British Red Data Books 1 Vascular plants 3rd edition Joint Nature Conservation Committee. 1999. P. 339-340.

Appreciating Lawn Weeds

This is the title of a recently published booklet by Martin Cragg-Barber, of which I was very kindly sent an advance copy. For anyone who has spent much time and money on the procurement of a 'billiard table' lawn, this publication should be the perfect antidote. It is written with humour and an obvious understanding of the historical and ecological value of this much neglected area of a garden that many of us own, but few of us perhaps appreciate fully.

Martin gives a good overview of the lawn and the common plants found therein, and has collated some delightful contributions from many others who share his fascination. I include one of these anecdotes below to give you a flavour of a booklet that I highly recommend for its fascinating, offbeat approach.

An Irish Perspective by Maurice O'Sullivan, Glenealy, Co. Wicklow



Common Speedwell, *Veronica officinalis*

Two main lawns grace our establishment. The smaller front lawn contains a lot of moss, so it is presumably not too well drained. Here Lady's – smock are let flower if they are noticed in time. Self- heal also occurs. Where the lawn extends under large bushes of Hebe, Cotoneaster, Escallonia and so on, *Viola riviniana* thrives, in one place as an introduced white-flowered form. A more purplish red violet, which I think is *V. reichenbachiana* is also frequent. The back lawn often gets a bit tall before it is mown. Knapweeds then manage to flower, also a Hawkweed, lots of



ribwort plantain, sorrel, white and red clover. Both lawns have lots of creeping buttercup and crops of flowers appear when they get a chance. Occasionally oak and purple beech trees provide seedlings in the grass beneath, and some of them are rescued. Less welcome is a colony of creeping thistle in the back lawn by the boundary hedge. *Veronica officinalis* (heath speedwell) is frequent but we haven't got *V. filiformis*, the prettiest of lawn weeds. We do have daisies, especially in the much-trodden areas.

The most glamorous find was *Epipactus helleborine* (broad-leaved helleborine), found whilst searching for anomalous heads of white clover. Common centaury used to be seen, but has been absent for several years. Where hedges and shrubbery bound the back lawn, lots of red campion and alkanet thrive and look very attractive through their long flowering season.

If anyone would like a copy of this booklet it is available, priced at £3.75 from: -

That Plant's Odd,
1 Station Cottages,
Hullavington,
Chippenham,
Wiltshire,
SN14 6ET
Please make cheques payable to That Plant's Odd.

Keith Hatton

The Holly and the Ivy...

Taken with kind permission from The Shropshire Botanical Society Newsletter - Autumn 2000, a highly recommended publication available on the internet.

At the risk of being too seasonal, it is good to have something to record in the dark months of winter. Below are details of two sub-species of ivy, the distribution of which is very uncertain because they are not always recorded separately. Also, there are notes on holly, with reference to the yellow-berried holly. There is a hybrid holly, called Highclere Holly, *Ilex x altaclerensis*, that is normally planted, but is also found naturalised in some woodland margins and old Victorian gardens left to go wild.

Ivy - family *Araliaceae*



Common Ivy, *Hedera helix* ssp. *helix*

Common Ivy, *Hedera helix* ssp. *helix*

This is the most common sub-species of ivy in Shropshire; it is native and common in woodlands especially on more alkaline soils. It is distinguished from the other native sub-species by



three diagnostic features, all of which should be observed in the specimen. The trickiest part is looking at the hairs - a x20 lens is invaluable here. The hairs are stellate which means they are star-shaped, with lots of little hairs projecting from one point (see below).

Do remember that ivy produces different shaped leaves on the flowering shoots!

Atlantic Ivy, *Hedera helix* ssp. *hibernica* Atlantic Ivy is the second native sub-species, not to be confused with Irish Ivy, *H. 'Hibernica'*, which is a cultivar and has very large leaves and rarely climbs. Both native sub-species are climbers. Atlantic Ivy is an oceanic taxon, becoming more common towards the west coast. It is probably rather under-recorded in Shropshire.

Common Ivy <i>Hedera helix</i> ssp. <i>helix</i>	Atlantic Ivy <i>Hedera helix</i> ssp. <i>hibernica</i>
Hairs under under-side of new leaves whitish and points projecting in all directions	Hairs on under-side yellowish and all points lying flat, parallel to leaf surface.
Leaves usually less than 8cm wide, often with 'marbling' along veins.	Leaves usually more than 8cm wide, more-or-less uniform dark green.
Leaf lobes usually lobed more than half way to base.	Leaf lobes usually lobed less than half way to base.

Holly - family *Aquifoliaceae*

Holly, *Ilex aquifolium* The native species of holly, with dark green glossy leaves, red berries in the winter. There are horticultural varieties of the species, sometimes variegated.

Highclere Holly, *Ilex x altaclarensis* Usually planted where it occurs, but being a fertile hybrid, sometimes growing from bird-sown seed. Cross between *I. aquifolium* and *I. perado* with many cultivars grown for their variegation. True Highclere holly is not variegated.

Holly <i>Ilex aquifolium</i>	Highclere Holly <i>Ilex altaclarensis</i>
Leaves ovate to elliptic	Leaves usually less than 2x as long as wide
Leaf margins undulate and spinose (although leaves produced above the 'browse' line may be smooth and less spiny.	Leaves flat and either spineless or with a few spines at the tip of the leaf, all pointing forward.
Berries usually red, but very rarely with orange or yellow fruit.	Berries usually red, but sometimes pink.

Sarah Whild



Notes and Queries

Please Use this Column as a botanical and horticultural notice board. Any questions can be sent to the Editor at the contact addresses listed below, and I will endeavour to answer (or find someone who can!) your questions.

In the last issue of Parnassia, the following questions were posed. I have attempted an answer to the first one, but have left the second one running in case any else would like to have a go!

Q. How can a selective weedkiller kill off the 'weeds' in my lawn without harming the grasses?

A. The most commonly used selective lawn weedkillers, make use of certain chemicals that behave as plant growth hormones to perform their task. The key to their effectiveness lies in the different rates at which plants can absorb and also de-toxify these substances within their cells. Although most plants have the ability to de-toxify the weedkiller, those that cannot do it quickly will die, not because the weedkiller is toxic as such, but because it is an extremely powerful growth hormone. If not, detoxified by the plant, this growth hormone causes the plant to grow too quickly and this upset in the normal pattern is enough to kill the plant.

Those of you who have ever used such chemicals on your lawns, will have probably noticed this effect, with all the broadleaved plants suddenly putting on a spurt of growth and standing clear of the grass. The act of mowing at this stage further weakens the plants, whose usual defence from mowing, that of growing in a flat

rosette beneath the level of the blades, has now been removed.

Q. Is there a simple way of identifying conifers in the field, without recourse to a cumbersome key?

Keith Hatton

.... And Finally

A Walking SSSI

SSSI's are being created in the strangest places these days.

Our editor has been scanning the highway's and hedgerows for many years in search of rare plant species. An early find of four 4-leaved clovers while waiting at a bus stop obviously provided some luck, as he has found several endangered red data book species this year.

His success has not gone unnoticed. Recently a colleague suggested that a great deal of trouble might be avoided, if Keith himself was declared to be a walking SSSI.

Jan Hatton



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