

Parnassia

The Newsletter of the Liverpool Botanical Society



Broad Leaved Centaury.

Sandhills, Formby, Lancashire.

(Now Extinct)

Trevor Thomas, del.

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September 1995

Editorial

Welcome to issue two. Thank you to all those who have helped with the newsletter, inputting information, proof reading and most importantly contributing articles. If anybody has ideas for future articles please let me know. Just a few words to avoid any future confusion regarding the title of the newsletter and the cover illustrations. While issue one matched both title and illustration it is intended that, for the sake of variety, future newsletters will employ a range of other species. This edition's cover shows the extinct Broad-leaved Centaury, *Centaureum latifolium*, known only from the Sefton Coast and last recorded in 1872 (A specimen of this can be seen in the Natural History Centre, at Liverpool Museum). Please also remember that the newsletter is still being produced on an experimental basis so any thoughts, views and ideas on its content, format and future direction would be particularly welcome (thanks for the favourable response so far). Finally, October sees the resumption of our winter programme of indoor meetings. In addition to a range of interesting presentations these meetings also provide opportunity to meet other members and a forum to discuss future ideas for the society. Meetings are held at Liverpool Museum on the second Tuesday of the month, starting with a Council Meeting at 7.00pm (all members welcome to sit in) followed by the evening's presentation at 7.30. Meetings usually finish around 9.00pm. Forthcoming meetings are:-

- 10th October. **A Late Holocene Safari at Formby Point.** Mr G. Roberts.
- 14th November. **Holiday Exhibits 1995.** All members are invited to contribute slides and specimens.
- 12th December. **The Origins of the Sefton Coastal Dune Flora.** Dr P. Smith
- 9th January. **Annual General Meeting.** All members are invited to participate.

If you require further details please contact Mike Palmer on 0151-478-4291.

CORRECTION.

To "In Search of the Autumn Crocus" *Parnassia* No. 1, April 1995, by Dave Bishop. The last paragraph should read: "I would like to end with a (rather wild?) piece of speculation. In *Plants, People, Places* newsletter 4 John Percy stated "There has been a strong historical tradition of herbal medicine among working class people in the North of England." There has also been a strong tradition of Catholicism, especially in Lancashire. The Crocus evidence suggests that there may have been two Catholic orders of medical herbalists active in the region. Could these orders have been the source of the herbalist tradition in the area?"

Apologies to the author.
Mike Palmer.

Vice-County News

The latest news is that the RECORDER 3.2 software for storing the vice-county records has just arrived. As yet the requisite ten floppy disks have not been taken out of their package and installed onto the computer. I have decided to wait until I am in a very patient and lucid frame of mind. Hopefully this will occur before the records for the 1995 season come flooding in! The local recorders around the vice-county have been assiduously recording our flora on a tetrad basis (i.e. 4 kilometre squares). This will allow RECORDER to produce both detailed distribution maps for all species as well as providing information on a 10 x 10 km square basis for the Atlas 2000 scheme being organised by the BSBI nationally.

RECORDER will also highlight the coverage of recording over the whole vice-county allowing future concentration on the least recorded areas to achieve as even cover as possible. News from the grass-roots shows that the lynch-pin of the local recording effort is Vera Gordon who is pounding the city streets as well as the green open spaces of her squares, covering far more tetrads than anybody else. The full extent of her efforts will show up well in the first distribution maps. The rest of us will have an awful lot of catching up to do!

Hopefully it will be possible to include existing botanical data from a variety of sources on to the new vice-county 59 database, however, there are now many other databases stored on a range of software systems. So there are some complex problems to overcome before valuable data can be incorporated from the various local authorities, universities, museums and private individuals scattered throughout the area bounded by Liverpool, Preston, Clitheroe, Colne, Manchester and Warrington. It is hoped that all available information can be assimilated so that the status of all vice-county plants can quickly be ascertained and firm definitions given to locally rare and scarce species.

Peter Gateley

Liverpool Museum News

JAMES BOLTON EXHIBITION.

A new exhibition on 'James Bolton of Halifax: pioneering 18th century naturalist and wildlife artist' opens in the old ground floor Kings Regiment Gallery at Liverpool Museum on 7th October. It comprises many original drawings of flowers, ferns, lichens and fungi along with rare examples of his books, and original manuscripts. Bolton (1735-1799) was

described as the finest drawer and collector of flowers in the North of England and although he lived in Halifax his travels, usually on foot, brought him as far afield as Snowdon and Liverpool. The exhibition runs to March 1996, admission free. Dr John Edmondson, curator-in-charge of the exhibition and author of an illustrated memoir on Bolton, will tell us more about the work of this eminent naturalist in the next issue (January).



Mountain Avens, *Dryas octopetala*, from James Bolton's '50 Drawings of British Alpine Plants'.

Additional events include:-

- The Society for the History of Natural History will be holding James Bolton Seminar, on 7th October.
- The North West Fungus Group and The Halifax Scientific Society will be organising a two day commemorative fungi foray, Sunday/Monday 8/9th October, to revisit some of the sites in Calderdale, West Yorkshire which were first recorded by James Bolton. This will be led by Mr Bob Taylor of the Sports Turf Research Centre, Bingley, and Dr Roy Watling of the Royal Botanic Garden, Edinburgh.
- Artist Jenny Brasier, who paints flowers in watercolours on vellum will be in residence at the exhibition on 24th and 25th October.

NATURAL HISTORY CENTRE

Currently on display in the NHC (until Dec. 31st) is a small selection of 'Poisonous Plants and Fungi'. The display includes some of the most deadly vegetation to be found in Britain but is actually aimed to tie in with the resurgence of interest in collecting wild food (witness the recent 'Cook on the Wild Side' television series). Most adult cases of plant and fungi poisonings arise from people confusing poisonous species for edible ones. The advice, therefore, for people thinking of taking up this gastronomic hobby would be to acquaint themselves first with the poisonous species before moving on to those they intend to eat.

Mike Palmer

Spring Flowers in Western Australia

A report of an evening meeting presented to the Society by Miss Vera Gordon, 14th March 1995.

In March Miss Gordon gave a talk on Spring Flowers in Western Australia illustrated by colour transparencies. The journeys from Perth north to Mount Augustus and back were described with the help of slides of scenery and habitats passed through. Going north the green country near Perth was soon replaced by flat land where large salt pans were drying out in the spring sunshine. Here, though far inland were salt marsh plants, a few familiar to us. Scrubby bush country continued for hundreds of miles with the occasional river gorge. Isolated homesteads were seen until the desert areas of bare rocky hills. The largest Mount Augustus claimed to be the largest rock in the southern hemisphere at 5 miles long and 3,000 ft high. The return was made staying at coastal towns arriving at the first one at 5.10 am after an overnight drive from the desert where our transport had had a few problems.

A day in Perth gave opportunity for camera repairs and shopping then south to Albany again with overnights at motels *en route*. The way was through lush forests of various species of *Eucalyptus*, some reaching great heights. Here there were real roads not just hardly discernible tracks as in the north, and also scattered small towns and villages, clouds and some rain.

Some of the many flowers seen were shown in botanical order. They included:-

PROTEACEAE 8 species of *Banksia* (of the 41 in Western Australia) and 5 *Grevillea* (of 150 in the area). Other genera illustrated in this large family were *Dryandra*, *Hakea*, Smoke Bushes (*Cotinus*), Cone flowers, *Stirlingia*, and a Woody Pear Bush.

The MYRTACEAE were represented by scarlet Albany Bottle Brush, *Beaufortia*, *Melaleuca*, a few of the 500 native *Eucalyptus* species, yellow, pink and white *Verticordias* or feather flowers and *Calytrix* or Star flowers.

The GOODENIACEAE genera of *Dampiera*, *Scaevola* and *Leschenaultia* were seen. Fan flowers came in shades of white, pink, red, blue and mauve and in a range of flower sizes.

The strange flowers of Kangaroo Paws, Cats Paws and Cotton Socks of the HAEMODORACEAE ranged from black, red, green, yellow, orange and white and from a few inches to 5 foot tall. Grass Trees had flowering spikes of hundreds of small white flowers and belonged to the XANTHORRHOEACEAE.

The hundreds of MIMOSACEAE were confusing. Even the most widespread *Acacia pulchilla* or Prickly Moses varied according to its habitat.

Of 34 *Drosera* species in Western Australia, 9 were seen, some up to 4 feet tall with clusters of white flowers on climbing leafy stems down to *D. platystigma* a few inches tall with orange flowers having a metallic sheen and the tiny pink Pimpernel Sundew *D. granduligera*.

ORCHIDACEAE- a familiar family contained unfamiliar genera. *Diuris* species of Donkey and Pansy orchids, *Caladenia*, included many species of Spider Orchid and *C. flava*, Cowslip Orchid, and *C. latifolia*, Pink Fairy Orchid. *Elythanthera brunonis*, Purple Enamel Orchid and *Lyperanthus serratus*, Rattle Orchid were among the many orchids seen.

Alien species though disliked by Australian botanists added to our joy. Pink *Gladiolus caryophyllacea* from South Africa growing in the woods were sweetly scented. Large white Arum Lilies *Zantedeschia aethiopica* graced southern woodlands. *Oxalis purpurea* grew along field edges and tall pink, peach and white *Watsonias* lined some of the roads. The most successful invader was a golden composite *Arctotheca calendula*, Capeweed, growing in almost flat rosettes at the edge of the road.

Among exhibits shown were specimens of mica from desert areas, wrinkled nuts of the Quandong, *Santalum acuminatum* and a fruiting head of *Banksia micrantha*.

Vera Gordon.

1995 Field Meeting Reports (part I)

GWERSYLLT - 29th April

(Led by Miss Vera Gordon)

A party of 16 set off from Gwersyllt Railway Station. The first stop was to see the large bucket-sized tussocks of Greater Tussock Sedge, *Carex paniculata*, filling the site of a small lake. The Wood Club-rush, *Scirpus sylvaticus* was not evident so early in the year but there were Marsh Marigolds, *Caltha palustris*, Ladies Smock, *Cardamine pratensis*, and overhead the Cherry trees, *Prunus avium*, were in flower.

The way then descended to the river Alyn which was followed along meadows and below a steep wooded bank. The trees were large Hornbeams, *Carpinus betulus*, some of which had "witches brooms", galls caused by the fungus *Taphrina carpini*. The perfume of wild Hyacinths, *Hyacinthoides non-scripta*, filled the air as we passed slopes blue with them.

Lunch was taken at the top of a track which was bordered by Pendulous Sedge, *Carex pendula*, in flower, also Ramsons, *Allium ursinum*, and Archangel, *Lamium galeobdolon*. Then to an old gravel pit where there were Cowslips, *Primula veris*, and along the banks on each side of the lanes, Violets *Viola riviniana*, Celandine, *Ranunculus ficaria*, Greater Stitchwort, *Stellaria holostea*, and Goldilocks Buttercup, *Ranunculus auricomus*, made a colourful show.



Cowslip, *Primula veris*.

The banks of the Alyn were rejoined through woodlands where under the trees the carpet of Golden Saxifrage, *Chrysplenium oppositifolium*, was like a cloth of gold. In wet flushes on the river bank the Butterbur, *Petasites hybridus*, had finished flowering and the female spikes had already lengthened to 2 feet.

Finally across the Gwersyllt Hall grounds, landscaped after open-cast mining, where the Smith's Pepperwort, *Lepidium heterophyllum*, was really luxuriant in places.

Vera Gordon.

AINSDALE AND BIRKDALE DUNES 20th May

(Led by Paul Rooney)

The second L.B.S. field meeting of the year was held jointly with the North West Naturalists' Union at Ainsdale and Birkdale sand dunes. 23 members including Paul Rooney - meeting leader and Senior Sefton Ranger attended the meeting at what is traditionally one of the most popular sites for both recreation and the study of natural history in the area.

Members assembled outside Ainsdale Station on what started as an overcast, slightly breezy day. This, however, gave way to hot sunshine towards midday (Yes, the heatwave had started back then!). Members were led first to the Birkdale sandhills where many typical dune species were observed *en route* including Sea Spurge, *Euphorbia paralias*.

The recently colonised young dune slacks, home to English Nature's species recovery Natterjack Toads (spawning at the time) provided more botanical interest. Here Marsh Pennywort, *Hydrocotyle vulgaris*, was abundant, along with Water Mint, *Mentha aquatica*, and Variegated Horsetail, *Equisetum variegatum*. Invasive Creeping Willow, *Salix repens*, were also very evident in these wetter areas. The young slacks also yielded the most interesting and certainly the smallest specimens of botanic interest of the day. The Red Data Book liverwort *Petalophyllum ralfsii* was located after much careful searching on hands and knees. Included in the International Convention on Conservation (Bern Convention), this rare liverwort had not been observed on the dunes since the 1960s. It was relocated in February/March of this year by Dr Martha Newton. It was suggested that this was encouraged by the high water table occurring at the time.

As we continued along the coastal path other species observed included many common dune and coastal species such as Biting Stonecrop, *Sedum acre*, Common Sedge, *Carex nigra*, Rest Harrow, *Ononis repens*, and Club Rush, *Eleocharis quinqueflora*. Species observed in flower included Lady's Smock,

Cardamine pratense, Houndstoungue, *Cynoglossum officinale*, Dog Violet, *Viola riviniana*, and Stork'sbill, *Erodium cicutarium*, plus a garden escape Solomon's Seal, *Polygonatum x hybridum*. The pretty Bog Pimpernel, *Anagallis tenella*, was observed in some of the wetter areas. Lamb's Lettuce, *Vallerianella locusta*, seen at other locations earlier in the year was also observed but much reduced in size in response to the heavy grazing pressure from rabbits.

The drier dunes were dominated by the grey foliose *Peltigera lichens* - hence their name 'Grey Dunes'.

Following the main meeting a few members accompanied Paul Rooney to look at the sand dune accretion seaward of Tagg's Island. The dune front is moving rapidly seawards and a new dune slack has formed with Baltic Rush, *Juncus balticus* and Sharp Club-rush, *Schoenoplectus pungens* already established.

Jo Hatton.

RISLEY MOSS 10th June.

(Led by Peter Gately)

About a dozen members and friends assembled at Birchwood Station on this fine morning. In order to visit two contrasting areas separated by the 1830 Liverpool-Manchester railway we resorted to using member's cars to convey us from the station to Rixton Clay Pits and then on to Risley Moss.

The main vegetation stands at Rixton are flower-rich grass swards, hedgerows, developing scrub, open water and extensive marshy and swampy tracts. We arrived just as many of the orchids were in their prime with Southern Marsh-orchid *Dactylorhiza praetermissa* and Common Spotted-orchid, *D. fuchsii*, most notable. The inexorable progress of natural succession from grassland to scrub and woodland was evident, with management work already underway to maintain some open areas for orchids.

There is a good system of paths winding through the matrix of wetland areas giving views of a great many plants. Collecting data for the vice-county records, Pricilla Tolfree recorded 183 species during the course of the visit. Fine-leaved Water-dropwort, *Oenanthe aquatica*, showed itself to advantage at the water's edge and there were some very fine stands of Ragged Robin, *Lychnis flos-cuculi*. Also prominent in the wetland area were yellow-green tussocks of Hop Sedge, *Carex pseudocyperus*. Further north in the reserve there is increasing woody regeneration and woodland flora is developing in places. Along the lane down the west side there are dense and rich hedges, with various micro-species of Bramble flowering well and a scattering of garden escapes including a lovely

stand of Dame's Violet, *Hesperis matronalis*, in full flower.

The second site, Risley Moss, is also managed as a nature reserve but here the main elements of the vegetation are birch/willow woodland and surviving areas of raised mire vegetation. The main open mossland areas, which were viewed from tall observation stands not allowing the vegetation to be seen in detail, could be seen to be dominated by Purple Moor-grass, *Molinia caerulea*, with Common Cotton-grass, *Eriophorum angustifolium*, and bog-mosses, *Sphagnum* species. Though there were some grassy clearings with orchids and herbaceous plants and some interesting ponds, this site was not so species-rich with only 78 species being recorded during the visit.

Peter Gateley



WALLASEY-MORETON 1st July.

(Led by Dr Keith Watson)

On a dull but warm day a party of seven set off from Wallasey Grove Road station towards the coast. Immediately, interesting plants were seen on the railway embankment including a hybrid willow (possibly *Salix repens* x *viminalis* = *S. x friesiana*), Asparagus, *Asparagus officinalis*, Large-flowered

Evening-primrose, *Oenothera glazoviana* and Black Mullein, *Verbascum nigrum*.

Introduced White Mignonette, *Reseda alba*, was seen at the corner of the golf course and then Sea Rocket, *Cakile maritima*, near the Coastguard Station Alexanders, *Smyrniolus olusatrum*, was above the site of the old Derby Pool, as the party moved on towards the Gun Site dunes.

Isle of Man Cabbage, now *Coincya monensis* ssp. *monensis*, was in fine flower and brilliant blue flowers of Sheeps-bit, *Jasione montana* and Harebell, *Campanula rotundifolia*, were admired. A Small-leaved Elm, *Ulmus minor*, was notable, also the yellow flowers of Spanish Broom, *Spartium junceum*, and abundant Burnet Rose *Rosa pimpinellifolia*. During lunch at a pleasant site at the edge of the dunes, we met a party led by Angus Gunn and found an alien Brome, possibly *Bromopsis inermis*.

After lunch, on the path towards Leasowe Castle we found Broad-leaved Everlasting-pea, *Lathyrus latifolius*, and Giant Hogweed, *Heracleum mantegazzianum*, but for me the highlight of the day was the Bee Orchids, *Ophrys apifera*, found by Peter Gateley near a path leading down towards the shore. Along the path above the sea defences, Yellow-wort, *Blackstonia perfoliata*, was found with Ragged-robin, *Lynchis flos-cuculi*, looking very small and dehydrated, and Sea-spurge, *Euphorbia paralias*, now spreading along the Wirral coast. Tiny seedlings of Sunflower, *Helianthus annuus*, were found in the sand as we continued to Moreton. Hard-grass, *Parapholis strigosa*, was found on very bare ground, noticeable by its conspicuous anthers.

Hemlock, *Conium maculatum*, was common on the road to Moreton station, in the heat its smell was very strong. Spiked Water-milfoil, *Myriophyllum spicatum*, was in flower near the station.

After some delay, we took the train to Bidston station. A now very reduced party of two walked around the Nature Reserve, which is now becoming very overgrown with some of the paths almost impenetrable. Southern marsh-Orchid, *Dactylorhiza praetermissa*, was in good flower on the motorway embankment as we walked back to Wallasey Village.

Keith Watson

Wirral's Native Black Poplar Hunt & Propagation

Wirral Countryside Volunteers have taken part in the Daily Telegraph Black Poplar Hunt and have found two previously unrecorded native Black Poplars, *Populus nigra var. betuifolia*, one at Oxton and one fine example with characteristic burrs and bosses at Thurstaston Hall, en route to Wirral Country Park. Native Black Poplars in Wirral are at the northern end of their natural range (Edgar Milne-Readhead, *Watsonia* 18, 1-5) these two finds brings the total number of native Black Poplars known in Wirral to nine.

Black Poplar's most distinguishing features are their downward arching branches and their trunks usually beset with burrs or bosses. The leaves are variable, even on the same tree, but a diamond shape or elongated tip, translucent leaf margins with rounded teeth are good indicators of the species.

The volunteers were fortunate to be able to propagate the native species from seed rather than clonal cuttings. At Ledsham SSSI one male and two female trees grow on the banks of an old marl pit in very close proximity. However most years there are no visible seeds despite the partners being only 10 metres apart. This may be due to the fact that the red catkins shrivel up in the dry March winds before having a chance to fertilise the female trees. However last spring 1994, a bough of one of the males trees broke off in a spring storm and a interested local resident, Peter Attfield, placed the male branch over the branch of a female tree and that year abundant fertile seed was produced. In future years the purity of seeds cannot be guaranteed as close by, recently planted male hybrid poplars will start flowering . Despite arriving three weeks after seed fall, we were able to gather plenty of moist seed amongst the nettle. They looked like miniature rolled oats, wrapped in cotton wool and from 500 seeds we obtained 70 seedlings which is about 14% seed viability. Perhaps the seed was not as fragile as previously thought. The most painstaking task is identifying the seeds and removing the fluff. Although fluff is great for transportation it may be a disadvantage - when they come to land it seems to keep them off the ground. The seeds once separated from the fluff, and placed on damp paper and covered with cling film soon germinate (in 1-2 days, no dormancy period at all) which would make interesting seedlings to grow in the classroom.

After creating a supply of seedlings it is important to find suitable planting sites locally. In the Wirral there is none of the Black Poplar tree's natural flood plain habitat. They require an open, unexposed, lowland site, damp with moving water. Being shade intolerant they are initially very susceptible to competition from coarse grasses, and rank vegetation. Good planting sites could be the north side of many marl pits that abound locally, or stream/ditch side hedgerow, though a short section of hedge would have to be coppiced to allow them to get a start. The first year's growth from seed was 11cm and this soon accelerates, growing 21 metres in just 30 years.

Considering most people cannot recognise native Black Poplar, and we found one unrecorded on the main thoroughfare to a country park, we may yet find some more around our many marl pits. Anybody who knows of suitable planting sites in Wirral and are interested in Black Poplars of a genetic mix but undetermined sex please ring Paul Loughnane (0151 327 1929) or Alan Williams (0151 608 8172). In the past there was a bias against female Black Poplar as they produce a huge abundance of seed fluff which coats everything in the immediate vicinity. Records of all new plantings will be sent to the Forestry Authority to avoid any confusion as to the origin or status of the tree in the future.

*Paul Loughnane and Alan Williams.
Wirral Countryside Volunteers.*

Seaweeds Past and Present.

INTRODUCTION

Scholars will argue endlessly, it seems, over the true identity of the Liver Bird and of the plant suspended from its beak. Issues of this kind are meat and drink to scholars. After all, from a position of total ignorance, I am happy to accept the description of the arms of the city, which explains the matter very tersely; "Arms; Argent, a liver (cormorant) with a branch of laver (seaweed) in its beak, proper. Crest; The liver with laver as in the arms, but with the wings spread. In fact, laver (a species of the red seaweed *Porphyra*) still grows in the Mersey, mainly in the early months of the year, on the rocks at New Brighton. However, it must be said there is scarcely enough to make a single small helping of laver bread and a hungry Welshman must needs go further afield.



The incorporation of a seaweed in the city arms is very apt for a major seaport. It also symbolises rather nicely the scientific study of seaweeds, which has been pursued actively and continuously in Liverpool for well over a century. The results of all this work tells us a lot about the changes in the local flora during this important period in the city's history.

HILBRE ISLAND

Victorian naturalists took their hobby seriously and, as natural history was very much about collecting, they collected avidly. This enthusiasm waxed almost to the point of mania with ferns and seaweeds, probably because both are rather flat and often intricately branched, so making visually attractive herbarium preparations. Dusty books of dried seaweeds still turn up in second hand bookshops as evidence of this passion. During the 1860's, several excursions were made from Liverpool to Hilbre under the guidance of Mr. F.P. Marrat from the City Museum. Writing in the *Liverpool Naturalists' Scrapbook* in 1863, he says "... these beautiful plants, growing as many of them do, in natural aquaria, and presenting the most varied, lovely and fairy like appearance... Surely nothing can have a greater charm for the eye of a true Naturalist, than some of the clear rock pools such as may be seen at Hilbre Island when stored with *Ectocarpus*, *Polysiphonia*, *Ceramia*, and other genera belonging to the other feather like seaweeds." The prose style, though over rich for current tastes, captures well enough the ardour of the Victorian enthusiast. Well, algae belonging to these groups are still to be found at Hilbre but not in great variety and it requires little analytical skill to work out that the rock pools are no longer crystal clear.

About 30 years after Marrat's observations, but drawing extensively from them, R.J. Harvey Gibson published in 1889 and 1891 new lists of algae for Hilbre. Harvey Gibson, who was subsequently to become the first professor of Botany at Liverpool University, unfortunately does not explain whether any changes in flora had occurred over the intervening period. Altogether, about 150 species of marine algae have been recorded for Hilbre and while these include a few additions to the Harvey Gibson lists, the picture is one of net decline. The species of green algae have decreased by about 26%, the brown algae by 42% and, of the red algae recorded, fewer than 40% remain. It is, of course, very possible that some of the records were wrong in the first place: algae are notoriously difficult to identify and most require a good microscope for correct determination. However, many of the large seaweeds are easily recognisable and the disappearance of the kelps (*Laminaria species*) from Hilbre must be genuine.

Dr. Margery Knight joined the staff of Harvey Gibson's department in about 1914 and I came to know her in the 1960's when she lived on the Isle of Man. I asked her on one occasion if she could recall seeing *Laminaria* at Hilbre and she was quite certain that she could, but gave me no date. Dr. Knight had been badly injured in a motor car accident in 1936 and could not have walked across to Hilbre after that date but confirmation that kelps were still present in 1934 at least came in an article by Mr. Eric Hardy in the *Hilbre Bird Observatory Report* for 1986.

How then have these seaweeds disappeared? Part of the explanation must lie in the silting up of the estuary, which will have buried a lot of the reefs and outcrops, but as some rock surface remains available for algae at and below low water, some additional reason must be sought. It is perhaps the reduction in water clarity which is responsible because light transmission through Dee Estuary water is poor and algal growth below low tide level at Hilbre is now scarcely possible.

THE MERSEY ESTUARY

If the seaweed history of Hilbre has been one of serious and continuous decline, the story of the Mersey flora is rather more complex. Even in Harvey Gibson's time it was plain that many of the species recorded by Marrat had disappeared. In his 1889 report, he quotes Marrat, who by then must have been quite an old man, "...the Mersey district is much less productive now than it was in former years. In 1860 the seaweeds on our coast were cleaner, finer in colour and more healthy in their general appearance than they are now...". This state of affairs, Harvey Gibson concluded, was due without doubt to the "...increasing amount of impurities in the

river Mersey and Dee, derived from the chemical and other works whose refuse finds its way into them..."

Well, as at Hilbre, the numerous losses have been mitigated by some gains, most of which are recent and which have turned up in old disused docks. The quality of the marine environment in these docks, unlike that at Hilbre, does seem to have undergone a real improvement. For example, a population of the brown seaweed *Desmarestia viridis* was found by a Liverpool University student in the Princess Dock in 1993. This species had not been reported from either the Mersey or Hilbre before; indeed, its nearest habitats are likely to be Anglesey and the Isle of Man. The restored South Docks complex also contains several other new species for the district and one, found in 1990 and 1991, a rather inconspicuous brown alga *Sorocarpus micromorus*, has been found in only a few localities in the U.K.; a rarity, in fact. Perhaps the greatly improved water clarity in the South Docks has been influential in promoting seaweed growth there. The construction of the artificial reefs at New Brighton and along the N. Wirral shore has provided new rock surfaces for algal colonisation but, so far, none of the seaweeds found on these has proved to have the novelty value of those in the docks. Nevertheless, the story from the estuary is plainly not one of unrelieved gloom.

SO WHAT IF.....

Water quality in the Mersey, it now seems certain, has improved in recent years and the chemical pollution, to which Harvey Gibson took such exception, is now at a level which can permit survival of the new dock algae, during their journey upstream at least. However, some chemical discharge to the river continues and episodes of serious pollution may still occur. The South Docks have a good defence against the latter for the dock gates can simply be kept shut until the discharge ceases and until tides have diluted its toxicity to an acceptable level but the estuary unfortunately has no such protection. So, what if chemical pollution ceased permanently? Seaweed growth in the estuary would then be limited, as at Hilbre, by poor light transmission through the muddy water but the return of some further species could be predicted. What if water clarity also improved, both in the Mersey and at Hilbre, and what if more rock, natural or artificial, became available for the establishment of seaweeds? Well, a rapid restoration of a diverse flora seems quite likely and if a Kelp forest were to reappear at Hilbre, that really would be a neo-Victorian happening worth celebrating.

George Russell

Liverpool Brambles Then and Now (part 1)

During the Victorian period numerous bramble specimens were gathered by several collectors from the Liverpool district and the Wirral Hundred. Many of the specimens were distributed to members of the Botanical Exchange Club, whilst the herbaria of several collectors have been donated to museums outside Merseyside.



The result is that local bramble specimens are widely scattered throughout the British Isles. At smaller institutions specimens may not have been by botanists for a considerable length of time viewed (if at all) with the result that specimens are often classified under erroneous names. Similarly any relevant literature is again full of outdated or dubious names. Nevertheless it is often possible to link statements to correctly determined specimens, or to species distributions. Webb's comments in De Tabley's Flora of Cheshire on several *Rubi* are often equally true (for Wirral brambles) today. The saga begins with J. Dickinson (author of the Flora of Liverpool 1851) collecting *R. sprengelii* from Walton in 1850 (LIV). Later in 1862 an unknown collector gathered *R. lindleianus*, *R. ulmiformis* and *R. tuberculatus* from the Claughton District of the Wirral. In the same year *R. vestitus* was collected in Aintree, perhaps by the same collector? A year later Henry Smith Fisher wrote of "The Roses and Brambles occurring in the Liverpool District". Could Fisher have collected the specimens?

John Harbord Lewis was at Greenbank, Wavertree in 1870 collecting *R. robiae* (BM det D.E. Allen 1995) and probably *R. vestitus* (Keighley Museum). He also collected *R. sprengelii* here in 1871 (Keighley). Although no *R. sprengelii* has been seen, *R. robii* and *R. vestitus* still occur, and can be found along the railway bank, north of Smithdown Road.

Later in 1879 Lewis collected what is probably *R. subtercanens* from near Moor Hall, Aughton. This species is particularly common in the Ormskirk area.

During the 1870's and the 1880's A.E. Lomax made many gatherings from the Cloughton/ Bidston area of the Wirral representing seven species still to be found in the area, (see Liverpool Catalogue) including *R. hylocharis* and *R. wirralensis*. He also collected *R. bertramii* from Simonswood, Kirkby (not yet refound by the author) and *R. lindleianus* from Gateacre in 1890 (LIV) and this is a common species in the Liverpool district.

Perhaps the biggest contribution was made by J.A. Wheldon between 1894 and 1901. Wheldon collected specimens of over eighteen different species, many of which were collected from the Walton/Fazakerly/Aintree area. Species include *R. gratus* with its large fruits which can be seen on the Liverpool Loop Line and Fazakerly Hospital today, *R. robiae* (which is probably the identity of specimens collected from Walton train stables), as well as the locally abundant *R. subtercanens*, from Walton (1900 BM), Thornton (LIV) and Hightown (BM and LIV indeterminate file).

Also at Walton, Wheldon gathered *R. infestus* and *R. rubristylus* which have yet to be refound, or are possibly extinct. *R. rubristylus* is a species of the North Midlands with outlying populations in Essex, Suffolk, The Isle of Man and Ireland, so geographically Wheldon's specimen is an important distribution record. *R. rubristylus* can be distinguished from other *Radulae Rubi* by the red styles that often protrude from the budding flower heads.

A good place to familiarise oneself with a few bramble species in the Walton area is Rice Lane Cemetery. Species include *R. lindleianus*, *R. nemoralis*, *R. vestitus* and *R. tuberculatus* as well as *R. errabundus* (which Wheldon did not apparently collect from Walton, perhaps *R. errabundus* escaped him?).

Rice Lane Cemetery is a good place to go with youngsters, even if you don't eat any Blackberries you can at least have a cup of tea, feed the farm animals and reflect on Wheldon gathering specimens from near the train station.

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Any further details gladly received.

Dave Earl.

CONTACTS:

- President:** Peter Gateley.
- Vice-Presidents:** Dr John Edmondson
Dr Angus Gunn
- Hon. Secretary:** Vera Gordon,
23 Alder Grove,
Waterloo,
Liverpool L22 2AL
- Hon. Treasurer:** Jean Bentley,
16 Waterford Road,
Oxton,
Wirral L43 6UU.
- Hon. Librarian/
Acting Editor:** Mike Palmer,
Natural History Centre
Liverpool Museum,
William Brown Street,
Liverpool L3 8EN.
- Hon. Editor:** Joan Vincent,
34 Burden Road,
Moreton,
Wirral L46 6BQ.