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Contributions for the next issue by the end of March please!

Contributions are welcomed as e-mail attachments to patricia.francis@bolton.gov.uk, or on disk, in most PC word processing formats (with a second file in rich text format *.rtf) or in typescript from contributors who do not have a PC. Illustrations should, ideally, be produced on A4 paper with a margin of at least 2.5cm all round with 'oversized' lettering (14pt normal/body text, if typed) to allow for it to be photographically reduced to A5 (approx 70% reduction) and still be readable.

New Studies in the Grindon Herbarium, The Manchester Museum and Other Recent Grindoniana

Daniel Q. King, 96 Longford Road Chorlton, Manchester M21 9NP

INTRODUCTION

The three great private herbaria that formed the major basis of the Manchester Museum Herbarium, the fourth largest in the UK, were described recently in a *Northwestern Naturalist* article by Suzanne Grieve, Curatorial Assistant, Botany ("Untold Treasures: the Manchester Museum Herbarium", (volume 7, part 3, 2006, pp. 5–6). The three collections are those of Charles Bailey, James Cosmo Melvill, and Leo H. Grindon. Some readers may already be aware of the Grindon Herbarium component and its almost unique status as being a "herbarium and library in one". Nevertheless, a brief introduction may be helpful.

Leopold Hartley Grindon (1818–1904) was born in Bristol and lived there for his first 20 years. He came to work in Manchester in 1838 and lived there until the end of his long and productive life at the age of 86. Grindon's interest in botany began when he was only 13, and by the time he was 15 he had begun carefully drying and mounting his plant specimens. From the time he was 18 Grindon had already been collecting specimens from Britain, both wild and cultivated, and eventually, through exchanges with other collectors and the kindness of friends who travelled widely, he acquired material from many countries and most continents. He began the format of his third and ultimate herbarium in about 1855, when he was 37 years old, and he continued to accumulate specimens and to incorporate illustrations and articles into it for at

least 31 years. In 1885–1886, when he was 67, he wrote a memoir about the herbarium's history. The Grindon Herbarium has been estimated at 39,000 specimens, and Grindon himself estimated the systematically integrated illustrations at 15,000.

Grindon was a prolific writer, a popular teacher of all things botanical and more, and his Saturday afternoon guided walks led to the founding of the Manchester Field Naturalists' Society in 1860. Its spirit is still in existence as the Manchester Field Club, a natural history society. During and after retiring from his "day job" in 1864 as a cashier at Whittaker and Co., he taught both privately and as a lecturer in botany at the Manchester Royal School of Medicine, and contributed many articles to the *Manchester City News* on botanical and other subjects. In getting to know about Grindon, one has the impression that although he was something of a public figure during his lifetime, he soon dropped from sight after his death. But he always hoped his "memorial", his herbarium, the "great amusement of my life", would be of use to students and scholars of the future. The remainder of this account will prove this is so. The herbarium's systematic combination of a very large number of the specimens with innumerable contemporary cuttings from periodicals and journals; correspondence with other collectors, botanists and nurserymen concerning particular species and new hybrids; and illustrations and text from classic botanical books pro-

vides a greatly under-utilised resource for the study of scientific, social and bibliographic histories, and the history and psychology of collecting. This article describes some of the recent projects which have been carried out or which are still in progress in the herbarium, and some studies related to Grindon's botanical activities generally.

FINDING THE SOURCES OF THE ILLUSTRATIONS

In January, 2006, after I had been working as a museum volunteer in the herbarium for a year, I was invited by the herbarium staff, Leander Wolstenholme (Curator), Lindsay Loughtman and Suzanne Grieve (Curatorial Assistants), to take up a project to try identifying the publications from which Grindon took the illustrations for his herbarium. Nine months later, after much new learning about both the history of botanical illustration and the associated bibliographic resources, I had found plates from 114 different source publications, of which eight have yet to be identified and confirmed. This is consistent with Grindon's estimate of "probably 100".

Over the first few weeks, at the rate of one day a week (later to be increased to two), I would find new illustration types and record as much information as might appear on the engravings or lithographs, such as the plate number, the artist, the engraver, the plant name, the printer, etc., and whether or not there were accompanying text pages. Bibliographic research yielded detailed information on the source publications. I made a digital image of each example and began to compile a series of computer-printable A4 sheets, one for each publication. This was for the purpose of producing a file which could be used as a relatively quick visual reference by people

working in the herbarium. By October 2006, it had become apparent that almost all the significant publications had been identified, although there is still scope for more work.

To accompany the register of digital images by publication mentioned above, I have also compiled an extensive detailed list of the example plates and their bibliographies. An article about the work and a checklist of the publications will appear in *Archives of Natural History* in April, 2007. Among the significant publications represented in the collection are Leonhardt Fuchs' *De historia stirpium commentarii insignes* (1542); Prosper Alpinus' *De plantis aegypti* (1592); Parkinson's *Theatrum botanicum* (1640); Linnaeus' *Hortus cliffortianus* (1774); and many others into the late 19th Century. As well as a great many Grindon examples from *Curtis's Botanical Magazine*, *Edwards's Botanical Register*, *Paxton's Flower Garden*, *Gardener's Chronicle* and the like, there are illustrations which were introduced into the herbarium from later accessions. Among these are 42 plates from Andrews' *Coloured Engravings of Heaths* (1802–1809) and a pair of exceptionally fine original drawings of *Pteridium aquilinum* by a John Allen, made to illustrate H. Ling Roth's *Crozet's Voyage to Tasmania, New Zealand, the Ladrone Islands and the Philippines, 1771–1772* (1891).

TRANSCRIPTIONS OF GRINDON'S MANUSCRIPT ABOUT THE HERBARIUM AND HIS OTHER REMINISCENCES

In 2005 and 2006, transcriptions were made of Grindon's "History and Description of my Herbarium" (Fascicle I) and his autobiographical reminiscences (Fascicle II) in the Grindon Archive. Suzanne Grieve transcribed Fascicle I.; Jenni Thomas tran-

scribed Fascicle II as part of the research for her dissertation for the MA Degree. After some further preparation, and using their work as a basis, I re-transcribed the manuscripts in exact detail, and was able to decipher most of the remaining difficult words and phrases in Grindon's handwriting. An article to publish these transcripts is in progress.

IN GRINDON'S FOOTSTEPS IN THE MERSEY VALLEY

David Bishop, an assiduous amateur botanist and recently a museum volunteer, has found that a number of plants listed in Grindon's (1859) *Manchester flora* are still "growing wild in the fields and woods, in the streams and on the hills ... round the good city of Manchester". David has studied the plants of Chorlton-cum Hardy and the Mersey Valley for over 30 years. He writes, "... it must be borne in mind that Grindon's book is not a modern scientific flora, and in particular, some of the locations ... can be frustratingly vague." Nevertheless, he has found candidate populations of several species, including Purple Spring Crocus (*Crocus vernus*), Cowslips (*Primula veris*), and Wild Daffodil (*Narcissus pseudonarcissus*) near enough to Grindon's descriptions to make reasonable connections. Surprising similar distributions to those described by Grindon are also apparent for Tansy (*Tanacetum vulgare*), still found on the "Banks of the Mersey, more or less all the way from Cheadle to below Lymm"; and the rare "Great Torch Mullein" (*Verbascum thapsus*) still occasionally appears on the riverbank at Chorlton.

Examples of plants which David has found to have declined or disappeared from the Grindon locations are "Great Ox-Eye Dai-

sy" (*Leucanthemum vulgare*) and Wormwood (*Artemisia absinthium*); but apparently more common are Comfrey (*Symphytum officinale*), reported by Grindon as growing "sparingly" around Jackson's Boat and the Chorlton area, and White Dead-Nettle (*Lamium album*), reported by Grindon as "rare", around Stretford, Didsbury, and a few other places, but now fairly common throughout the Mersey Valley.

The flood meadows that were common in the mid-19th Century, such as those "around Jackson's Boat", contained Green-winged Orchid (*Anacamptis morio*), Meadow Saxifrage (*Saxifraga granulata*) and Adderstongue Fern (*Ophioglossum vulgatum*), which are now considered nationally to be rare or scarce, and David has found no trace of the first two. However, in 1995 he found "a huge colony of the last plant hidden among the long grass on Chorlton Ees". And the "Autumnal Crocus" (*Crocus nudiflorus*) still persists, albeit with a much-altered habitat.

David concludes that if Grindon could visit the Mersey Valley today, he would be shocked by many of the changes brought by the intervening 140 years, but that he would still be able to recognise many of the characteristic plants.

AN UNDERGRADUATE DISSERTATION

Phillip Simms based his Art History BA dissertation on material in the Grindon Herbarium in 2005–2006, and also carried out bulk documentation on herbarium specimens. His dissertation is entitled, "A Study of the Botanical Collection of Leopold Hartley Grindon and its Relation to Contemporary Nineteenth-Century Culture and Society". A copy is kept in the herbarium office.

POSTGRADUATE WORK

The archive of Grindon's documents is also substantial. Zoë Burkett, a student on the Art Galleries and Museum Studies MA Course, has been preparing the Grindon papers for Archives Hub (www.archiveshub.ac.uk) - a national gateway to descriptions of archives in UK universities and colleges. This work is related to her MA dissertation.

Jenni Thomas, who has already been mentioned for her transcriptions of Grindon's autobiographical reminiscences, completed her dissertation for the MA Degree. It is entitled, "'The Great Amusement of My Life': Leo Grindon's Botanical Collection". Her paper aims to help develop a more subtle understanding of Grindon's understudied herbarium, and to reveal how illuminating an analysis of natural material can be. It also sets out to demonstrate how collections enter into both a symbolic and symbiotic relationship with their collector. The main headings from which her conclusions emerge are three: Grindon's physical and conceptual method of collecting and its interactivity with the man himself; the way in which the collection contributed to aspects of Grindon's life, particularly its role in building his external reputation and influencing his financial resources; and the social and cultural aspects of the collection and of his teaching activities. The last of these deals with such matters as Grindon's attitude toward the education of women; the way colonialism had a bearing on the collection; and questions of 'popular' versus 'scientific' botany as they arise in Grindon's life and work. Within this framework Thomas also deals with a number of other topics of significant interdisciplinary interest.

CURATORIAL WORK – THE LONG HAUL

Barbara Porter, who will be well-known to members of the North Western Naturalists' Union as a fern specialist, has been doing bulk documentation and curatorial work on the Grindon Herbarium, updating, re-mounting and re-filing specimens. The conservational value of long-term work like this on such an extraordinary resource is inestimable. She writes,

It wasn't until I had spent several years going through the British, European and World ferns that I finally embarked on the monumental task of curating Grindon's General collection. It's taken me about four years to get a quarter of the way through it! Until Daniel started work on the illustrations and articles, I used to ignore them, apart from cleaning them up as I went along. I only admired the way Grindon had mounted them so ingeniously, with hinges along the left-hand edge so that each could be turned over and read on both sides, and then on to the next one. Often there was a specimen underneath, but sometimes there was just the illustration with some description of its uses as a garden or industrial plant. Sometimes I come across blank sheets of paper with tiny snippets of information at the bottom, as if they're waiting for a specimen that never turned up. It was only recently that I began to realise what a valuable and unique resource we have, with specimens, descriptions and illustrations all bound together.

In 2005, Suzanne Grieve undertook bulk documentation of the herbarium's orchid collection. The result is a summary of the holdings, listing the number of specimens of each orchid genus, the number of articles, illustrations, and so on. The informa-

tion is available on the Manchester Museum website, www.museum.man.ac.uk.

Phillip Simms, whose BA dissertation has already been mentioned, also undertook bulk documentation of several of the early plant families, including Ranunculaceae, Magnoliaceae, Dilleniaceae, Nymphaeaceae, Calycanthaceae, Annonaceae, Menispermaceae, Berberidaceae, and Papaveraceae.

GRINDON AND THE MANCHESTER FIELD NATURALISTS SOCIETY

Audrey Locksley, a herbarium volunteer and member of the present Manchester Field Club has been looking into the history of The Manchester Field Naturalists' Society (MFNS), formed by Leo Grindon in 1860. She writes that

... its aims were recreation, health and enjoyment of native flowers. He was an active member until his death in 1904; president twice, secretary, and botanical referee. The earliest walk was on May 5th, 1860, to Cotterill Clough, by the River Bollin, now a remnant of natural land by the airport runway. In the Report for 1879, Grindon, in his "Recollections of Manchester over the past 40 years", says that the former wild places have been built over and "... the purple spring crocus ... [that] once grew abundantly ... in the meadows adjacent to St George's Church, Hulme" is no longer seen.

Visits by the MFNS from 1860 to 1889 were extensive, as shown in a summary. In the same volume a list of published works by Leo Grindon shows what a prolific writer he was. He also lectured and could speak at length on a variety of subjects, including heraldry and architecture, and was well acquainted with literature. "The Tennyson Flora", three lectures given to the MFNS,

are in a lively, flowery and poetic style. "Tossed up like foam ... a belt of meadowsweet ... by the margin of a hidden streamlet, transports the mind ... to the edge of the sea." His comments that Tennyson portrays women so well – full of geniality, common sense, and other virtues – echo Grindon's own happy references to women and especially tributes to his wife at a grand presentation on his 80th birthday in 1898. "She is the better half ... in reality ... she is really three quarters."

While his contacts among the Manchester elite seem to have moved the MFNS away from its original aims, he continued to stimulate a keen interest in botany and other branches of natural history. This was well in keeping with the progress of scientific knowledge in the second half of the 19th Century and the Victorian passion for flower collecting. There are a few negative remarks or omissions by Grindon, such as the fact that he never refers to Richard Buxton, whose "Flora" was published about the same time as his own; and Charles Bailey's differences with him, which led to the setting up of the Manchester Field Club (1899 - 1909). Perhaps these observations reveal another side of Grindon. Nevertheless, one of the old botanists, Abraham Stansfield, in his sonnet to Leo Grindon on his 80th Birthday says, 'He loved all things of beauty here below, But flowers most.'

White-Letter Hairstreak at Wallsuches, Horwich, Bolton (SD655118)

**Jill Mills, 13 Stoneycroft Avenue, Fox-
holes, Horwich, BL6 6AN**

During the spring my friend Ken Haydock and I discussed the idea of checking the elms in our area in July with maybe the chance, albeit a slim one, of finding White-Letter Hairstreak. So during the afternoon of Saturday July 15th with hot sunny conditions prevailing, Ken decided to check out an oak where last year we had a colony of Purple Hairstreaks just in case they had emerged early. After twenty minutes of staring at the oak with no success, he decided to walk fifty yards or so to a Wych elm of possibly twenty-five feet high in the close proximity of four slightly smaller elms all of which were on the southerly aspect at the edge of the wood. After a few minutes, he observed the erratic flight of what appeared to be a hairstreak butterfly at the top of the largest elm but the insect landed out of sight. This was repeated twice more but on the fourth occasion, the silhouette of the insect could be seen through the translucent leaf. It then obligingly walked forwards and Ken could see the black and white banded, clubbed antennae. This confirmed that the insect was a butterfly and what else could it be but a Hairstreak! After a few seconds it turned and disappeared. He waited a few more minutes but due to shortage of time he had to leave with the hopes that he had discovered a White-Letter Hairstreak on our patch.

Just by chance, on the following day at (July 16th) we had decided to attend the meeting of the Lancashire Butterfly Group who were looking for White-Letter

Hairstreak in Rock Garden, Blackpool. It was 12.20pm when we had superb views of White-Letter Hairstreak including a female who crawled along a twig, abdomen down, looking for the ideal place to lay eggs. We very much enjoyed our morning as it was only the second time we had seen the species, the first being at Bentley Woods, Wiltshire a couple of years ago. We felt very welcome with the members of the Lancashire Branch who willingly shared information and enthusiasm.

After the meeting we had intended to drive to South Shore to hunt for orchids but as it was so hot and the roads so busy we decided to return to Horwich and try to confirm Ken's suspicion that the butterfly he had observed was indeed White-Letter Hairstreak.

Arriving at the elms in Wallsuches, Horwich (NGR SD655118) at 3.30pm on a very hot July afternoon we walked and watched until 4.15pm when at last we observed a butterfly in the typical erratic flight of a Hairstreak species. The insect landed out of sight but after a few moments it took to the air then landed in full view two-thirds of the way up a tree in typical closed wing position. Superb views through our binoculars confirmed that we were indeed looking at White-Letter Hairstreak! We even had time to set up our Nikon scope to give us fantastic views of this beautiful insect. Over the next twenty minutes we had more sightings and were almost certain that we had seen at least two individuals. It gave us an incredible feeling to know that we had another Hairstreak on our patch, meaning that within a radius of 300 metres we had Green, Purple and now White-Letter Hairstreak.

Due to work commitments only Ken was able to visit the site again before we went

on holiday. It was July 21st another hot, sunny day when we had superb views of an individual. It was at a height of eight inches from the ground and fifteen inches away. Unfortunately, after our holidays, the site could not be visited when the weather conditions were suitable so we had no further sightings. But who knows what 2007 may bring?

Thanks to Ken Haydock for his help and comments on this article.

GPS and Plant Recording

**Dr. John Lowell, 37 Henley Avenue,
Cheadle Hulme, Cheshire, SK8 6DE**

Hand held GPS units have unquestionably been a great boon for biological recording: especially for plants, which stay put. However, they are not (I think) a complete alternative to conventional map-work, and they are sometimes trusted to an unwarrantable degree.

The GPS system is subject to various errors. Notably, conditions in the upper atmosphere introduce variable and unpredictable signal delays and corresponding errors in location. This error is usually quoted at about +/- 7m, but that is a root-mean-square value (a sort of average error), and implies that the location error will vary from time to time, mostly between about 5 and 10 metres but occasionally more (or less). In addition, there are smaller errors due to slight deviations in satellite position etc., and a poor signal can introduce further uncertainty. The instrument itself can make an estimate of the error associated with poor signals but it cannot of course know anything about atmospheric conditions, so it is not clear how

far one can trust the "error value" which some instruments quote.

What this amounts to, broadly, is that a GPS set will almost certainly give you an exact 6-figure grid reference. An 8-figure grid reference (defining a location to 10m) will sometimes be correct but in general the least significant figure may be wrong by 1 or 2 units, giving an error in location of 10-20 m). The least significant figures of a 10-figure grid reference is *meaningless* (ie for a hand-held "leisure" unit; there are sophisticated systems which measure position relative to a fixed ground-based station, and they can be accurate to perhaps a few centimetres).

The increasing tendency to give grid-references at the 10-figure level is therefore worrying. It is highly desirable to locate your plant to within 1 metre (especially for bryophytes etc), but your GPS cannot do it for you. For many types of terrain you can do much better using the traditional descriptive method, for example "on the N bank of the stream about 5m upstream from the bridge at SD7010" (note that a GPS reference could put you on the wrong bank and on the wrong side of the bridge!). GPS is still useful of course, in saving you the bother of working out the grid reference from the map, and (more significantly) ensuring that you have referenced the right bridge, not the one 200 m upstream! Of course there are situations (such as open moorland and extensive sand dunes, where landmarks are few) where GPS is much the more accurate method. But I don't think you should imply, by quoting a 10-figure reference, that anyone seeking to re-find your plant need only search a 1 square metre area.

It would be reasonable to doubt what I say. Why, you may well ask, do manufacturers

make instruments showing 10 (even 12) figures when only 8 are justified? Best not to take anyone's word for it but to estimate the accuracy yourself. It is easy, with a 2.5 inch map and a mm ruler, to locate (say) a road junction to an accuracy of 10 m (8-fig gridref accuracy) and compare it with your GPS reading. My 8-figure device agrees exactly with the map rather less than half the time; typically, it is in error by anything from 10-30 metres. My GPS is quite old and yours perhaps may do better (though I doubt it). Some technoenthusiasts have assured me that it's the map that's wrong rather than the GPS system. I doubt that too, but even if it were so we would need to be aware that vice-county boundaries are formally *defined* by OS maps, not by satellites. And even though no one (as far as I know) has formally said so, a tetrad is implicitly defined by grid lines on a map and not by distances from satellites.

Finally, it is worth mentioning the fact (confirmed by several other people I have discussed the matter with) that GPS sets seem to take a long time to reach their full accuracy: often 10 minutes or even longer. Mine, on one visit to Blackstone edge, was wrong by more than 100 m (putting us in the wrong vice-county!) for more than half an hour before rapidly revising its estimate. This was after the Americans stopped introducing deliberate errors; I don't know why devices take so long to settle down (and maybe only some of them do) but I find it definitely advantageous to leave the machine on all day, using rechargeable batteries to avoid expense.

INTERESTING FINDS

Late Large White (*Pieris brassicae*) Caterpillars

Patricia Francis, Collection Team, Bolton Museum, Le Mans Crescent, Bolton

It is the first week in December as I write this and I have a colony of Large or Cabbage White Caterpillars actively munching their way through nasturtiums which have as yet survived the frost in a sheltered part of my garden. The adults remain active until October and these larvae must be the result of a late pairing. I will continue to watch them with interest until and if the frost kills the plants. I can find no record of these caterpillars so late in the year. Is this yet another affect of global warming? Has any one else observed unusual activity in our flora and fauna?

BOOK REVIEW

The Wild Flower Key, New Edition

Francis Rose and Clare O'Reilly.

Published by Frederick Warne

£19.99

ISBN: 0723251754

The first edition of this book has been in print for 25 years. It has always been one of the best flower identification guides, bridging the gap between simple pictorial guides and the technical, thorough and largely illustration free New Flora of the British Isles by Stace. As such it has had a place in the affections and rucksacks of multitudes of British botanists.

When a book has been consistently successful altering it might be viewed as dangerous. However the changes introduced

by the new co-author, Clare O’Rielly, have significantly improved the book. This has been achieved through a combination of appropriate revisions, judicious deletions and small but significant innovations. The most obvious removal is the brief coverage of grasses, sedges and rushes, for me the weakest part of the first edition. Presumably it is felt that these are covered better and more comprehensively elsewhere. Also excluded are the north-western European species that are absent from Britain. This of course removes any claim for the book to be a flora of Northern Europe. Instead the authors have aimed at making the book as thorough a guide as possible to the flowering plants of the British flora.

The revisions include updating the scientific names in line with Stace’s flora (the last edition was based upon the venerable Clapham, Tutin and Warburg). In addition membership of the British flora has been reconsidered with the resultant addition of several, now common, naturalised alien species. There has also been a significant number of new illustrations and the keys within the families, based upon floral characters, have been revised. This latter change is particularly welcome. Although the previous keys were generally workable there were a number that were confusing. For instance in the *Fabaceae*, regardless of what species I held in my hand, the key told me it was Marsh Pea! The new illustrations are a distinct improvement with crisper images and clearer details of key characters. The overall presentation has also been improved to give a greater clarity of text and an overall more contemporary feel.

The innovations include an expanded introductory section on using the keys and the book as a whole (including floral structure), an extended illustrated glossary,

plant conservation status and a guide to ancient woodland indicator species. These are welcome additions and any new botanist (and a few old ones) would gain significantly from a considered study of the introductory section (with real life flower to hand for dissection).

My only complaint is that I would have liked a revision of the vegetative keys at the start of the book. While useful they are not as comprehensive as they might be and the three way split on some questions goes against the grain for someone reared on dichotomous keys. Perhaps publisher’s deadlines prevented this being revised – hopefully it can be done for the third edition.

Overall this is a thorough and excellent revision of a long lived classic. The authors and publishers are to be commended on augmenting and updating the book while maintaining the strengths of the original such that it will maintain its position as the premier British key to flowering plants.

Paul Ashton

**NORTH WESTERN
NATURALISTS’
UNION
ANNUAL GENERAL
MEETING**

2pm, Saturday 3 March 2007

**Bolton Museum, Le Mans Crescent,
Bolton**

In the Basement Meeting Room

SOCIETY DIARY

ACCRINGTON NATURALISTS' AND ANTIQUARIANS' SOCIETY

Meetings start at 2.30 pm at Antley Methodists' Church Hall, Blackburn Road, Accrington. Non-members welcome - £1.00 minimum lecture fee.

Sunday 7 January 2007 : Members Slides and Exhibits

Afternoon tea

Sunday 21 January : Treking, Tropical Islands – Mauritius and Reunion

Dr Paul Hindle

Sunday 4 February Cotton-Wool Country

Margaret Curry

Sunday 18 February : Mountain Gorillas of Rwanda

Dr. Kathleen Edwards

Sunday 4 March : Diving around Scotland

David Moss

Sunday 18 March : Plants of Bowland and North Lancashire

Eric Greenwood

Sunday 1 April : The Day the Sky Fell in – The Vesuvius Explosion

David Cummings

Sunday 15 April : The Natural History of Martin Mere

Charlie Liggett

Sunday 29 April : AGM

Refreshments, Slides and Exhibits

BOLTON FIELD NATURALISTS' SOCIETY

All lectures are held in the Dido Suite, Bolton Town Hall, Bolton, starting at 7.20pm.

Monday 8 January 2007: Flowers of the Machair

Steve Halliwell

Monday 5 February : Mountain Wildlife

Steve Garland

Monday 5 March : AGM & Wild Wings and Wanderings

Cliff Heyes

Monday 2 April : White Wings over the Arctic and Indian Oceans

Gordon Yates

LIVERPOOL BOTANICAL SOCIETY

Indoor meetings are held at the Clore Natural History Centre, World Museum Liverpool, William Brown Street starting at 11.00am.

Saturday 13 January 2007 : Liverpool Botanic Garden

Dave Kelly and Mike Brown

Saturday 10 February : Annual General Meeting

Followed by a resume of the 2006 field meetings, slides, photos, exhibits etc.

Saturday 10 March : The Forest of Bowland

Eric Greenwood

MANCHESTER FIELD CLUB

Indoor meetings are held at Sale United Reformed Church Hall, Montague Road near Sale Metro station, commencing at 7 pm.

Saturday 6 January 2007: Chorlton and Sale Water Park.

Meet 11.00 am at the Warden Centre Car Park at the bottom of Maitland Ave, off Barlow Moor Rd, Chorlton. Bus 47 from Manchester.

Walk leaders: Christine & Roger 0161 740 7670.

Saturday 10 February : Greater Manchester Ecology Unit

Graham Jones and Derek Richardson

Saturday 24 February: Dunham Park and Bridgewater Canal

Meet 11.00am NT Car Park (£4, GR 732877). Please liaise with NT cardholders. Cafe open.

Walk leader Audrey Locksley 0161 963 2733 or mobile 07779 451 342.

Saturday 10 March: Wildflowers of the Balkans

Dave Bishop

Saturday 24 March : The Mersey around Northenden

Joint walk with MOS. Meet 11 a.m. at car park by Tatton Arms Hotel, Mill Lane, Northenden (SJ 832 903).

Walk leaders Margaret Mc Cormick (0161 941 2728) and Maurice Lees.

**NORTH WESTERN NATURALISTS' UNION
ANNUAL GENERAL MEETING**

**2pm, Saturday 3 March 2007
Bolton Museum, Le Mans Crescent, Bolton
In the Basement Meeting Room**

ROCHDALE FIELD NATURALISTS' SOCIETY

Indoor meetings are at Cutgate Baptist Church, Edenfield Road, Rochdale.

All excursions depart from the cul-de-sac at Manchester Road, coaches 9am, cars 10am.
Coaches start the return journey at 5pm during BST, otherwise 4pm.

Thursday 11 January : Islay Magic

Gordon Yates

Saturday 13 January : Martin Mere coach-trip

Leader Joyce Wood

Saturday 27 January : Buckden Clough car-trip

Leaders Eileen and Derek Clutterbuck

Thursday 8 February : Life on the Seashore

Dr Hugh Jones

Saturday 10 February : Carsington water, Derbyshire coach-trip

Leader Jim Taylor

Saturday 24 February : Roddlesworth car-trip

Leader Alan Cross

Thursday 8 March : Flowers of the Town and Tip

Peter Hill

Saturday 10 March : Leighton Moss coach-trip

Leaders Peter and Ann Schofield

Saturday 24 March : Haigh Hall, Wigan car-trip

Leader Alan Ternent

Thursday 12 April : Members Evening

Saturday 14 April : Brimham Rocks & Pateley Bridge coach-trip

Leader Sonia Allen

Saturday 28 April : Wayoh Reservoir car-trip

Leader Suzanne Blatcher

Saturday 12 May : Padley Gorge, Hathersage coach-trip

Leader Kate Sutton

Saturday 26 May : Jumble Hole Clough car-trip

Leader Charles Flynn

SADDLEWORTH NATURALISTS

Indoor meetings are at Brownhill Visitor Centre, Uppermill, starting at 7.30 pm

Wednesday 10 January 2007 : Biodiversity in Oldham

Stacey Cougill (Biodiversity Officer for Oldham MBC)

Wednesday 14 February : Diving around Scotland

David Moss

Wednesday 14 March : Wildlife Gardening

Kim Paterson, Lancashire Wildlife Trust

Wednesday 11 April : AGM

Plus members' slides and light refreshments

ALTRINCHAM AND DISTRICT NATURAL HISTORY SOCIETY

Unless otherwise stated, all indoor meetings will be at Hale Methodist Church, Oak Road, Hale, starting at 7.30p.m.

Excursions leave from the public car park at Cecil Road, Hale (behind Safeway). If you intend to join an excursion, please give three days notice to the leader. Food and drink for the day and suitable footwear is advised.

Please note that dogs are not permitted on reserves.

Tuesday 9 January: Dragonfly Quest

Illustrated lecture by Mike Taylor

Tuesday 16 January: New Year Dinner

Venue to be announced - Details from Committee

Saturday 10 February: Dibbinsdale and the Wirral Coast

9.30am Full Day Excursion contact Anne Mason 0161 980 8645

Tuesday 13 February: Flowers of Sikkim

Illustrated lecture by Marion Bray

Tuesday 27 February: Life on the Seashore

Illustrated lecture by Hugh Jones

Tuesday 6 March: Supper and Social

Details from Committee

Tuesday 13 March: Norwegian Fjords & the Land of the Midnight Sun

Illustrated lecture by David Cummings

Tuesday 27 March: Annual General Meeting

With a short slide show to conclude the evening. Exhibits of natural history are welcome. The supplementary Spring/Summer programme will be available at this meeting.

Saturday 31 March: Ploughman's Lunch

Details from Committee

Tuesday 17 April: "In search of the Dotterell"

Illustrated lecture by John Lintin Smith

Tuesday 8 May: Preserving our Footpath Heritage

Illustrated lecture by Peter Rhodes

Saturday 19 May: Gaitbarrows and Silverdale

9.15am Full Day Excursion. Contact Mike Pettipher 0161 865 0118

Tuesday 24 July: Annual Barbecue

Details from Committee

Tuesday 25: September

The first indoor meeting commences.