

ONTENTS

The Lesser Silver Water Beetle - *Hydrochara caraboides* in Cheshire

Andy Harmer.....2

Garden Guests

Patricia Francis.....3

Book Review - *Fungi*, New Naturalist 96

John Taylor.....5

Note to Affiliated Societies.....6

Society Diary

Calendars of Meetings of Affiliated Societies.....7

Contributions for the next issue by the end of November 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.

The Lesser Silver Water Beetle – *Hydrochara caraboides* in Cheshire

Andy Harmer, 79a High Street, Frodsham, Cheshire, WA6 7AN
andy@andyharmer.com

Cheshire is often described as the pond capital of Europe, and for a good reason; around 16,000 ponds still exist in the Cheshire landscape and this does not include garden ponds. The county of Cheshire has the densest pond landscape in lowland Britain and probably has no equivalent elsewhere in north-western Europe. The principle reason for this is the deposits of underlying clay, known as ‘marl’. When spread on agricultural land marl reduces acidity and increases fertility, so marl was a valuable resource in historical times before chemical fertilisers were widely available, and the practice of digging and spreading marl was widespread. The pits where marl was dug filled with water and became ponds.

One animal that inhabits a tiny fraction of these ponds is the Lesser Silver Water Beetle (*Hydrochara caraboides*), so named because of the reflective bubble of air that covers the abdomen giving the beetle a silvery appearance. This rare insect is known to occur in only one other county in England and that is Somerset.

Following dedicated surveys for this beetle in 2005/06, a tally of 40 breeding pools in 11 tetrads as well as and another 12 locations where adult beetles are now known to occur in Cheshire. When mapped the distribution gives a concentration of records in lowland mid-Cheshire, although it is thought that this may reflect recorder effort rather than being a true picture of occurrence.

The Lesser Silver Water Beetle has an interesting life cycle. The adult beetles seek out pockets of shallow clear water usually within a couple of metres of the ponds’ perimeter for their breeding activity. There the relative warmth of the water will enable both the beetle larvae and the necessary prey species to develop faster. A silk chamber in the shape of a golf club is constructed within a freshly cut, folded leaf. The plant species often used is Broad-leaved Pondweed. At the top of the fold a silken mast is formed giving the cocoon a boat-like appearance. Between forty and a hundred cylindrical eggs are laid before the cocoon is sealed with silk. The eggs are stacked vertically to protect the developing larvae from drowning if flooding of the egg chamber occurs. Once hatched the larvae cut their way to the outside through the silk mesh joining the folded leaf. This whole process takes about two weeks.

The newly hatched larvae swim a short distance and attach themselves to emergent stems of vegetation such as rush or bur-reed. They anchor themselves near the surface of the water where they ambush soft bodied invertebrates such as water lice, freshwater shrimps and mayfly nymphs. The larvae are voracious predators with a formidable set of jaws and in old text books are referred to as the Water Tigers. Pupation requirements are not yet clear but common features of good breeding ponds are floating rafts of vegetation and mud. Either feature is likely to provide appropriate conditions for a pupation chamber. The adult beetle is vegetarian.

The threats to this species are many but most obviously detrimental would be the infilling of ponds or loss of ponds by natural succession; the beetle will not survive once it is surrounded by trees. Also the Lesser Silver Water Beetle prefers water bodies that lack fish. Some species of fish, including Sticklebacks are known to predate aquatic invertebrates so the introduction of fish to a pond would be an obvious threat. Wildfowl on ponds can alter the marginal vegetation by grazing and increase the nutrient levels of the water by defecation. Therefore the introduction of wildfowl could certainly cause problems for this insect. Likewise the introduction of non-native plant species such as the Australian Swamp Stonecrop, Floating Pennywort and the Parrot's Feather to ponds would be problematical for this species. These exotic plants grow quickly and densely and both out-compete native pond plants and cover ponds in dense mats removing the open water spaces that this beetle requires for its floating egg cocoon. Conversely extreme vegetation clearance of a pond would also destroy the necessary habitat for this beetle. A further threat could be due to the management of the surrounding area, for example fencing, which would exclude farm animals as it is known that the trampling and disturbance, certainly by cattle is beneficial for the species.

Finally it should be noted that the Lesser Silver Water Beetle receives legal protection through its inclusion on Schedule 5 of The Wildlife and Countryside Act (added in 1992) and is listed as a species of conservation concern on the Cheshire Biodiversity Action Plan. The BAP process has been particularly successful for this species; two dedicated surveys have been funded by the lead partner (The Environment Agency) with results almost doubling the number of

known breeding sites, a leaflet has been published and distributed to landowners and interested parties, and a powerpoint presentation has been showed to a number of audiences inside and outside the county. The knowledge gleaned from the surveys has been used to make up English Nature's guidelines for developers and local authorities in Cheshire.

GARDEN GUESTS

Patricia Francis c/o Collections Team, Bolton Museum, Le Mans Crescent, Bolton

While most of us interested in wildlife regularly put out food to attract birds into our gardens, how many of us also effectively use plants and other attractions for the benefit of wildlife. Packaged bird food such as peanuts and black sunflower seeds are readily available from supermarkets as well as specialised bird food suppliers, so that providing food for the birds in our gardens has become as easy as supermarket shopping for ourselves. These convenience bird foods have transformed the hobby of garden bird-feeding to such an extent that it perhaps seems unnecessary to grow food-bearing plants specifically for birds.

The provision of food on a bird table or in feeders is undoubtedly important for many of our garden visitors, particularly during the cold winter months, but at other times of the year birds will benefit from the food that garden plants can provide. A suitably stocked garden will not only provide birds with a good supply of natural food but will also provide shelter and a place to breed. The preferred garden for birds contains mature trees and shrubs and plenty of variety in the form of herbaceous and shrub borders. There should ideally be a good

number of native plants, some lawn and a wild area where perhaps the likes of nettles, thistles, groundsel and teasel are allowed to flourish and set their seed. A shallow pond will cater for the need of birds for fresh drinking-water and a place to bathe. Thick cover close to feeding stations and drinking areas will ensure that birds have a safe retreat from predators. Other desirable features include compost heaps, log piles and dead wood for insects; moss for nesting material and safe places for birds to nest. A variety of nest-boxes suited to different species can be made or purchased but dense vegetation in the form of a hedge or ivy is also ideal.

This scenario would be a paradise for many garden birds but unfortunately it falls outside the realms of possibility for many people because of lack of space. Nevertheless, by incorporating just a few of these attractions into your garden you will be helping local birds and other wildlife. It is unlikely that any of us would want to transform our well-manicured garden into a wilderness, but there are still plenty of things that we can do to encourage birds into our gardens throughout the year.

Garden plants can provide direct benefits for birds in the form of fruit and seeds, but perhaps more importantly, they provide suitable habitats for invertebrates on which many garden birds feed. If birds are to breed successfully they require a good supply of invertebrates to feed to their young. Even species that are predominately seed eaters feed their chicks on protein-rich invertebrates to ensure their rapid development. A pair of blue tits, for example, may make over six hundred visits to their youngsters during the course of a day with beaks full of insects. It is really a matter of reaching a compromise between a purely

cultivated garden and one that makes provision for birds and other wildlife. Pest control is a dilemma for many gardeners, as most would not want to nurture legions of aphids, snails and leaf-munching caterpillars. Ironically, these are exactly the invertebrates which garden birds require to feed their chicks. Without these so-called 'pests' many birds would not be able to raise their broods and indeed many gardens are poor nesting habitats for this very reason. It does take some courage to do nothing when an infestation of aphids smothers your roses or lupins but the larvae of ladybirds and hoverflies will soon appear and begin munching their way through hundreds of the offending creatures. A way to encourage these welcome predators is to grow companion plants, creating borders filled with flowers, herbs and vegetables all jostling together. For example bright yellow marigolds are a good way of attracting hoverflies. In this way, trying to mimic nature with as many different plants as possible in a limited area, pests and diseases really can be reduced.

In addition to allowing some insects to survive within your garden, there are a number of plants that can be grown for their fruit and seeds. The cotoneaster is an excellent berry bush for birds. It is easy to grow and when grown against a wall it will also make a good nest site. It is generously covered in berries in autumn, attracting thrushes, finches, tits, blackcap and possibly even waxwing. Other berry-bearing shrubs include blackberry, elder, ivy, honeysuckle, berberis, pyracantha and mahonia. The hawthorn is a wonderful plant that can be grown as a shrub, hedge or tree and provides dense cover for nesting species such as greenfinch and blackbird. The bright red haws are attractive in autumn and

will quickly be stripped by the local thrushes. Mature native trees take up a great deal of space within a garden but even a single rowan, silver birch or willow supports large numbers of insects. Birds such as long-tailed tits and willow warblers are known to take nectar and pollen from pussy willow, making it an ideal garden species.

Most native flowers attract a host of insects including butterflies and are equally as attractive as those introduced from all over the world for our gardens. Many also produce a good supply of seeds that finches, in particular, relish during the autumn. Teasel is a handsome plant that stands tall and provides good nectar flowers and later fine seeds on which goldfinches readily feed. Lavender too has great appeal both as an attractive scented plant in its own right but also by providing nectar for butterflies and bees, and seeds for finches.

Like all of us, birds enjoy a drink to wash down their meal. A pond is therefore a worthwhile addition to any garden. Even an upturned old-fashioned dustbin lid kept full of clean water will be used by many small birds to drink and bathe. A small pond will also attract aquatic life as well as birds. When creating a garden pond make sure that it has gently sloping sides with shallow margins so that small birds can easily access to bathe. Some birds also enjoy sunbathing on hot summer days and certainly appreciate an area of bare ground where they can just spread their wings and soak up the sunshine.

With proper planning and a little compromise, any garden, whatever the size, can become a haven for birds and other wildlife. Careful planting and sympathetic gardening can greatly increase the range and numbers of bird species that visit your garden and will enhance the enjoyment of your own mini-oasis!

BOOK REVIEW

Fungi, by **Brian Spooner**
and **Peter Roberts**

New Naturalist Library no. 96

Collins 2005

£40 hard-back ISBN 0-00-220152-6

Harper Collins 2005

£20 paper-back ISBN 0002201534

With 594 pages, this is a large volume, but this is a vast subject, classified as the Kingdom Mycota with its many species interacting in many different ways with other life forms. Similar groups, traditionally studied by mycologists, are included. While lichens are real fungi, and included, the authors recommend Oliver Gilbert's sister volume *Lichens* (2000). A great deal of research went into the writing of this book by the authors Brian Spooner and Peter Roberts, both mycologists at Kew and both involved in field mycology, given the time. As well as being up-to-date, the book covers a wider range of fungi than its excellent predecessor in the same series, *Mushrooms and Toadstools* by John Ramsbottom (1953) and covers the area between academic studies and field mycology. For identification of species one looks elsewhere, but a deeper understanding of the ecology of fungi itself adds so much to that pursuit.

About one third of the volume describes what fungi are and what they do, their evolution, diversity and numbers (minimum 500,000 species, at least 90% not yet described!). Another third on the habitats of fungi, and this is an amazing range, the rest covers human interaction with the fungi, both positive and negative, in health, food and technology. Finally, there is an up-to-date chapter on conservation.

The writing is concise, not a word wasted, but very readable. Just dip in to this book for information on, say, luminosity, ocean depths or soy sauce and be amazed. The book is tastefully illustrated with numerous colour photographs and a few line drawings. The 23 page bibliography is necessarily limited, but allows further study.

John Taylor

Notice to Affiliated Societies

It would be greatly appreciated if this notice could be read out to your membership at your next indoor meeting.

As with all newsletters it is very difficult to fill these pages, in this case three times a year. The Committee of the North Western Naturalists' Union would like to ask the affiliated Societies to please invite their members to submit articles for publication in this newsletter. It could be an original article or perhaps one which may have been already printed in your own newsletter, in which case it will be duly credited. It could be a short note, a report of a field meeting or a longer article. It can be written in a light or more serious style. All articles are very welcome.

The Editor (see inside front cover)

If you are receiving this journal and are no longer an officer of your Society which is affiliated to the North Western Naturalist Union please could you pass this journal to the person who now has that role and ensure that the contact name and address is changed with our Treasurer. (see inside front cover)

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 29 October : Flowers of the Machair

Steve Halliwell

Sunday 12 November : Natural History of Madagascar

Malcolm Edmonds

Sunday 26 November : Chasing Bats – from Gaping Gill to Tropical Cloud Forest

Prof. John Altringham

Sunday 10 December : Islay Magic (film)

Gordon Yates

Sunday 7 January 2007 : Members Slides and Exhibits

Afternoon tea

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

Dr Paul Hindle

Sunday 4 January Cotton-Wool Country

Margaret Curry

BLACKBURN AND DISTRICT BIRD CLUB

Indoor meetings on Mondays at St. Silas' Church Hall, Preston New Road starting at 7.45pm.

Sunday 12 November : Leighton Moss

Leader John Collins

SADDLEWORTH NATURALISTS

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

Wednesday 8 November : A Local Stream – Lyme Park to Cheadle

Tom Barkley

December : no meeting

Wednesday 10 January 2007 : Biodiversity in Oldham

Stacey Cougill (Biodiversity Officer for Oldham MBC)

Wednesday 14 February : Diving around Scotland

David Moss

BOLTON FIELD NATURALISTS' SOCIETY

Monday 30 October

CENTENARY LECTURE

Travels of a Plantsman

by

Roy Lancaster

former member of Bolton Field Naturalists' Society

Bolton School, Art Centre, Chorley New Road, Bolton at 7.30pm

Tickets priced £5, £6 & £7

from : Doris Critchley - 2, Albany Grove, Tyldesley, M29 7NE

tel : 01942 884644

BOLTON FIELD NATURALISTS' SOCIETY

All lectures (except where mentioned) are held in the Dido Suite, Bolton Town Hall, Bolton, starting at 7.20pm.

Monday 6 November : Exploring the Volcanic Landscapes of Europe and The Americas

Mike Gosling

Monday 4 December : Puzzles and Pies

Eric & Joan Wright (with refreshments)

Monday 8 January 2007: Flowers of the Machair

Steve Halliwell

Monday 5 February : Mountain Wildlife

Steve Garland

FYLDE NATURALISTS' SOCIETY

Lectures are usually fortnightly from September to March and start at 7.30 pm at the Fylde Coast Alive Church Hall, Raikes Parade, Blackpool. Please telephone Gerry Stephen (01253 895195) for further details.

Saturday 18 October : Bats

David McLean

Saturday 21 October : Garstang to Scorton Coach-trip

Leader Carole Thaw £5.50

Wednesday 1 November : Martin Mere your Local Nature Reserve

Mick McGough

Saturday 4 November : Marton Mere and “Mr Fleetwood”

Leader Chris Hawkins £6.50

Tuesday 7 November : Knott End to Pilling Car-trip

Leader Barry Dyson, meet Ferry car-park 11.00am

Wednesday 15 November : Wildlife and Geology of Costa Rica

Mike Gosling

Saturday 18 November : Pennington Flash to Wigan Coach-trip

Leaders Gerry And Melody Stephen £6.50

Wednesday 29 November : The Cistercian Way (audio visual)

Don and Sheila Moore

LIVERPOOL BOTANICAL SOCIETY

Please confirm with Wendy Atkinson (0151 478 4216) or Keith Watson (07784 184511) if you intend to participate in field trips. Indoor meetings will be held in the Clore Natural History Centre, World Museum, William Brown Street, Liverpool.

Saturday 21 October : Dibbinsdale Fungal Foray

09.30 Chester train from Central. Alight at Bromborough Rake station. Arrive 9.50

Leader Keith Watson

Saturday 11 November : Holiday Exhibits, Slides, Photos, Specimens etc

Members are urged to bring along specimens of interest. Botanical accounts from near or far are welcome.

Saturday 9 December : The Liverpool Botanical Society, a Hundred Years Old

Keith Watson

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 24 October The Best of Nature:

Illustrated lecture by David Platt

Tuesday 31 October Bonfire and Social:

to include a Bring and Buy Sale. Details from Committee

Tuesday 7 November Face to Face with Owls:
with Bill Higham

Tuesday 21 November A Slice of Oz - The Blue Mountains:
Illustrated lecture by T W Barkley

Saturday 9 December Marbury Walk and Pub Lunch:
Details from Committee

Tuesday 12 December The Natural History of Marbury Country Park:
Illustrated lecture by Chris Moseley

2007

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.

NORTHWESTERN NATURALISTS' UNION - BRYOPHYTE AND LICHEN SECTION

All meetings start at 10.30 am unless otherwise stated. Bring food and clothing for a full day in rough country and bad weather. Please check with the leader or section secretary a day or so before the meeting in case of cancellation or changes.

Section secretary : John Lowell tel. 0161 485 6892. email lokr@beeb.net

Saturday 21 October : Bretton Clough

Meet Bretton village, SK200779.

Leader Martha Newton.

Saturday 18 November : Werneth Low

Meet Lower Higham Visitor centre SJ 950936.

Leaders A&N Bamforth.

Saturday 9 December : Wainstone (below Combs Edge)

small parking area at SK0287.7703.

Leader Joan Egan.

NELSON NATURALISTS' SOCIETY

Indoor meetings at Holmefield House, Gisburn Road, Barrowford starting at 7.30pm. All welcome, admission £1.

Wednesday 18 October : Rare Plants of Northern Britain

Colin Twist

Wednesday 1 November : Where the Curlew Cries

John Shaw

Wednesday 15 November : A Taste of the Picos

Margaret Sixsmith

29 November : Wetland Wildlife

Steve Knell

ROCHDALE FIELD NATURALISTS' SOCIETY

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.

Saturday 28 October : Hopwood car-trip

to be announced

