GLASGOW NATURAL HISTORY SOCIETY NEWSLETTER

February 2012

David Palmar
(Newsletter Editor)

Next Newsletter Deadline
22 March 2012

GNHS is a Registered Scottish Charity Web-site:
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2012 Subscriptions **Richard Weddle**

Subscriptions for 2012 fall due on **January 1st**. Subscription renewal forms are enclosed with this Newsletter – but ONLY for those who haven't already paid, or who don't pay by standing order (according to my records).

2012 Meetings

February
Tuesday 14th
6.30pm Tutorial: Lampreys: love and life (history strategies). John Hume
7.30pm Lecture: Blood, sweat and deer(s): using animal DNA evidence to aid wildlife crime investigation. Lucy Webster
Tuesday 28th
6.30pm AGM: followed by Lecture: Plants: the (real) silent witnesses. Jennifer Miller

March
Tuesday 13th
6.30pm.Tutorial: Rodent and parasite dynamics on the islands of Loch Lomond. Victoria Paterson
7.30pm Lecture: Why snakes lost their legs: thoughts on the origins of snakes. John Murphy

April
Tuesday 10th
6.30pm Tutorial on bats, by Keith Cohen (a follow-up to his November lecture)
7.30pm FILM: 'Taking Root: the vision of Wangari Maathai'. This is about the inspiring tree-planting work in Kenya, carried out by the Nobel Peace Prize winner who sadly died last year.
Friday 13th
7.30pm Lecture: Wild flowers and gardens. Roy Sexton. Jointly with Hamilton and Paisley NHS
Venue: Old Parish Church Halls, Leechlee Road, Hamilton. See March/April Newsletter for transport details

May
Tuesday 8th
6.30pm Tutorial on 'Local adaptation: Scottish frogs in a changing climate', by

Anna Muir
7.30pm Lecture by Anuschka Miller, Dunstaffnage Marine Laboratory, on 'Going bald on top: the past, present and future of the Arctic ecosystem'.

EXCURSION REPORTS

Visit to Victoria Park, 30th June 2011 — Bob Gray

This visit was attended by nine people. The 20 ha (50 acre) park was opened in 1887 and named after the Queen in honour of her diamond jubilee. This explains the Jubilee Gates, manufactured by Macfarlane's Saracen foundry, moved to their present location about 1960 on the north side of the park owing to road works on the park's south side in connection with construction of the northern approaches to the Clyde Tunnel.

The park is most famous, indeed world famous, for its 330 million year old Lepidodendron ("scale tree") giant club moss, Carboniferous fossils and this was where we began our roughly clockwise tour of the park. The 11 fossil tree stumps were uncovered in 1887 within a quarry being exploited for whinstone (dolerite). The world's first fossil protecting building was constructed over the site which is now a SSSI. The area immediately surrounding the building has a landscape that possesses a number of interesting trees, of which arguably the most fascinating is a mature Monterey cypress (*Cupressus macrocarpa*), very rare in the Glasgow area. It is one of the parents (the other is a Nootka cypress) of the well-known, rapidly growing hybrid, Leyland's cypress. Other trees within the Fossil Grove include an old Tibetan cherry (*Prunus serrula*) and mature Corsican pines (*Pinus nigra* ssp. *laricio*) as well as more recently planted Japanese maples (including *Acer shirasawanum*) and Hinoki cypresses (*Chamaecyparis obtusa*).

The park is remarkable for its large number of lime (*Tilia* spp.) bordered pathways and very long northern lime tree boundary. The more mature limes are common limes (*Tilia x europaea*) but in amongst these and along the paths are many other limes including broad-leaved (*T. platyphyllos*), small-leaved (*T. cordata*), Crimean (*T. x euchlora*) and silver (*T. tomentosa*) limes. A fully mature example (i.e. tall and well-girthed) of this last species was found towards the NW corner of the park,

The Fossil Grove, on the west side, is not the only part of Victoria Park that contains fascinating trees. At the east end is an arboretum which must be one of Glasgow's best kept arbor "secrets". It was apparently planted for educational purposes and many of the specimens are growing well. Some of the interesting species found here include Brewer's weeping spruce (*Picea breweriana*), Roble (*Nothofagus obliqua*) and raouli (*N. alpina* ex *nervosa*) southern beeches, dawn redwood (*Metasequoia glyptostroboides*), Japanese red cedar (*Cryptomeria japonica*), both single (*Fraxinus excelsior* f. *diversifolia*) and narrow-leaved (*F. angustifolia*) ash trees and a fine, grafted birch thought to be *Betula utilis* var. *jacquemontii* 'Grayswood Ghost'. This is indeed a precious area.

Near the highest point of the park, in the NE, we came across two sizable, mature silver maples (*Acer saccharinum*). Then, towards the middle, near the SS Daphne

memorial, are found some impressive specimens. The plaque has been (temporarily) removed from the memorial but it is one of two (the other is in Elder Park, Govan) to the loss of this vessel at launching in 1883, Some 124 people were drowned in the disaster. Five attractive pillar apples *(Malus tschonoskii*) surround the memorial and its rose beds.

To the east of this is a large single-leaved ash as well as a putative tupelo tree (*Nyssa sylvatica*). A massive ash tree (*F. excelsior*) is to be found here as well. To the west of the memorial is a grove that contains an ancient and large apple tree (*Malus sylvestris*) as well as a huge wild cherry (*Prunus avium*) that was measured as c.325 cm in girth. Here also are four impressive Corsican pines.

Towards the end of the evening we observed a long row of strongly weeping birches, apparently *Betula pendula* 'Tristis', along the playing field boundary. We proceeded along an avenue that contained a number of different whitebeams such as Swedish (*Sorbus intermedia*), *Sorbus aria* 'Lutescens', *S. aria* 'Majestica' and perhaps *Sorbus* 'Wilfrid Fox' (a putative hybrid between common, *S. aria,* and Himalayan, *S. vestita,* whitebeams). The differences amongst these last three were considered. Finally, as the sun was setting, we found, near the Westland Drive gate, growing from an old stump, many shoots of an apparent example of Finnish whitebeam (*S. hybrida*) or bastard service (*S. thuringiaca* 'Fastigiata'. The former is widespread. The two are similar looking hybrids of different origins. The leaves of this sprouting specimen were extremely large.

Sometimes known as Glasgow's prettiest park, it is not one of Glasgow's largest but certainly contains many more fine and interesting specimens than might be expected from its size.

Craigallion, 3rd August 2011 **Edna Stewart**

Eleven members took part in this walk, although some arrived late and others left early. The aim of the outing was to look at the grasses and sedges growing in the Craigallion Marshes and Loch.

We didn’t need to wade into the marsh to see the plants, since a boardwalk led us over the wettest part, bringing us close to Lesser Pond Sedge (*Carex acutiformis*), Reed Canary Grass (*Phalaris arundinacea*) and Common Reed (*Phragmites australis*). Wood Club-rush (*Scirpus sylvaticus*) was seen by the stream, where we also found Floating Sweet-grass (*Glyceria fluitans*), and Unbranched Bur-reed (*Sparganium emersum*). There was abundant Meadowsweet (*Filipendula ulmaria*) and Common Valerian (*Valeriana officinalis*) in the marsh. Growing on a drier grassy slope we found Burnet-saxifrage (*Pimpinella saxifraga*), an attractive white Umbellifer which flowers later in the season.

A track leading down to the loch gave us a good view of both White (*Nymphea alba*) and Yellow Water-lilies. Bottle Sedge (*Carex rostrata*) which still had fruits was growing near the water’s edge while further out in deep water was a dense stand of Common Club-rush, sometimes called Bulrush (*Schoenoplectus lacustris*) with stems up to 3 m tall. The bright blue flowers of Water Forget-me-not (*Myosotis scorpioides*) were also to be seen. Having seen a good selection of wet-land plants, we returned by the same route.

GNHS Excursion Programme 2012 **Anne Orchardson**

Thought is currently being given to this year's excursion programme, to be circulated with the Match/April Newsletter. If any members have thoughts on excursions, please contact Anne Orchardson from mid February onwards.
Anne Orchardson

BLB Grants awarded January 2012 **Morag Mackinnon**

Grant Reekie: Impact of eco-tourism and other human activities on the threatened Blue-headed Macaw, Peru	£600
Kirsten Fairweather: Cyprus – ongoing research Turtlewatch	£500
Gillian Simpson: G.U. expedition to Trinidad	£700
Eilidh Smith: G.U. expedition to Tobago	£700
Kirsty Park: Counting Pine Martens	£900
Richard Weddle: Micromoth Identification	£100

Treasurer - Vacancy

We are urgently needing to find someone to take over as Treasurer. The job consists of recording payments in, cheques out of the bank account and keeping the "Cash Book" (on Excel Spreadsheet) allocating these sums to the various accounts and preparing bank reconciliations on a monthly basis and final accounts at year end. Attending three BLB and Council meetings which are generally held in March, September and January; when the BLB Grants are discussed and awarded and these awards are followed through by the Treasurer. This position is open to all members - or if you know someone - not yet a member - who would be suitable and would like to assist - please get in touch with Morag Mackinnon.

Who Were They? **Ian C McCallum**

A good Public Relations adviser could have proved beneficial to two Scottish scientists. We have all heard of Darwin, in fact the word Darwinism is listed in dictionaries as - 'The Theory of the Origin of Species'; but how many of us have heard of Patrick Matthew and James Croll? The following information about Matthew and Croll has been taken from the 'Wikipedia' Encyclopedia.

Patrick Matthew

Patrick Matthew was born 20 October 1790 at Rome, a farm held by his father John Matthew near Scone Palace, in Perthshire. His Mother was Agnes Duncan, stated to belong to the family of Admiral Duncan, the ancestor to the Earls of Camperdown. On his father's death and while only seventeen, he took over the management of *Gourdiehill* in the Carse of Gowrie, between Perth and Dundee. He inherited *Gourdiehill* through his mother, in the possession of whose family it had been for more than two hundred years. He was educated at Perth Academy and the University of Edinburgh, though he did not graduate, as he had to take over the responsibilities of managing and running the affairs of a somewhat modest but significant property estate. Over the years he would successfully nurture, cultivate, and transform much of the estate's farmland and pastures into several large orchards of apple and pear trees, numbering over 10,000. He became an avid proponent as well as interested researcher of both silviculture and

horticulture, both of which influenced his growing awareness of the forces of nature. This awareness, along with his own experiences acquired from years of working his own modest estate would later frame a strong base of reference to form his own opinions and theories.

Patrick Matthew (20th October 1790 – 8th June 1874) was a Scottish landowner and fruit farmer. He published the principle of natural selection as a mechanism of evolution over a quarter-century earlier than Charles Darwin and Alfred Russell Wallace. However, Matthew failed to develop or publicize his ideas, and both Darwin and Wallace said they were unaware of Matthew's work when they published their ideas in 1858

James Croll

James Croll was born in 1821 on the farm of Little Whitefield, near Wolfhill in Perthshire, Scotland (NO1733). He was largely self-educated, teaching himself physics and astronomy. At sixteen he became an apprentice wheelwright at Collace near Wolfhill, and then because of health problems a tea merchant in Elgin, Moray. He married Isabella Macdonald in 1848. In the 1850s he managed a temperance hotel in Blairgowrie and was then an insurance agent in Glasgow, Edinburgh and Leicester. In 1859 he became a caretaker in the museum at the Andersonian College and Museum, Glasgow, so as to have access to books to allow him to develop his ideas. From 1864, Croll corresponded with Sir Charles Lyell, on links between ice ages and variations in the Earth's orbit. This led to a position in the Edinburgh office of the Geological Survey of Scotland, as keeper of maps and correspondence, where the director, Sir Archibald Geikie, encouraged his research. He published a number of books and papers which ‘’were at the forefront of contemporary science’’ including *Climate and Time, in Their Geological Relations* in 1875. He corresponded with Charles Darwin on erosion by rivers. In 1876, he was elected Fellow of the Royal Society, and awarded an honorary degree by the University of St Andrews. He retired in 1880 because of ill health, and died in 1890.

Theory of ice ages

Using formulae for orbital variations developed by Leverrier (which had led to the discovery of Neptune), Croll developed a theory of the effects of variations of the Earth's orbit on climate cycles. His idea was that decreases in winter sunlight would favour snow accumulation, and for the first time coupled this to the idea of a positive ice-albedo feedback to amplify the solar variations. He suggested that when orbital eccentricity is high, then winters will tend to be colder when earth is farther from the sun in that season and hence, that during periods of high orbital eccentricity, ice ages occur on 22,000 year cycles in each hemisphere, and alternate between southern and northern hemispheres, lasting approximately 10,000 years each.

Croll's theory predicted multiple ice ages, asynchronous in northern and southern hemispheres, and that the last ice ages should have ended about 80,000 years ago. Evidence was just then emerging of multiple ice ages, and geologists were interested in a theory to explain this. Geologists were not then able to date sediments accurately enough to determine if glaciation was synchronous between the hemispheres, though the limited evidence pointed more towards synchronicity than not. More crucially, estimates of the recession rate of the Niagara Falls

indicated that the last ice age ended 6,000 to 35,000 years ago - a large range, but enough to rule out Croll's theory, to those who accepted the measurements.

Croll's work was widely discussed, but by the end of the 19th Century, his theory was generally disbelieved. However, the basic idea of orbitally-forced insolation variations influencing terrestrial temperatures was further developed by Milutin Milankovitch and eventually, in modified form, triumphed in 1976.

Although Croll developed the Theory, it is Milankovitch whose name is remembered, and used in relation to the Milankovitch Cycles

References

1 *Patrick Matthew and Natural Selection* by W. J. Dempster Paul Harris Publishing
2 *Darwin's Guilty Secret* by Hugh Dower http:// www.hughdower.com/guilty.html
3 Wikipedia Encyclopaedia www.wikipedia.org/

Old News from Prince of Wales Island **Richard Weddle**

We recently received a query from Dr Ruth Kiew who is compiling a flora of Penang in Malaysia. She had been researching a fern, *Davallia lorrainii* Hance, which was discovered and named after a Dr WB Lorrain, and she was wondering if he was the same William Buckland Lorrain who was the first vice-president of The Natural History Society of Glasgow (1851).

A quick check of the *early Transactions of the Society* revealed that Lorrain was a malacologist, and following a lead from Richard Sutcliffe, I discovered that Fred Woodward had written a biography in *The Glasgow Naturalist* 22(1) – this confirmed that Lorrain had resigned the vice-presidency after only a few months and emigrated to Penang (which was then known as Prince of Wales Island).

The fern too has since been renamed – it's now considered a subspecies: *Davallia trichomanoides* var*. lorrainii.* A note on the website of The National Herbarium of The Netherlands describes Dr Lorrain as 'a strenuous collector of herbs on the island' and he apparently sent specimens to William Gourlie in Glasgow as well as to the collections at Kew and Edinburgh – though it doesn't say if these included *D. lorrainii*.

'TEK' Equipment **Richard Weddle**

As we are within sight of the next field-recording season – if indeed there is a break - it seems a good time to remind everyone that the Society possesses a number of items of equipment for the use of members. Many of these were purchased with the aid of a recent generous bequest from Thomas E Kinsey.

The list indicates that some items are 'in use'; this does not necessarily mean that they would not be available to others for a short time. However, there are also some items that have been purchased for particular research projects, and will not be available until the end of those projects. Items such as nets and sorting trays are sometimes needed for GNHS field excursions and other such events. GNHS Council do stipulate that requests to use items for any significant length of time should be supported by an outline of the project for which they are required, and that the results should be submitted for publication in *The Glasgow Naturalist.*

I should also point out that though the bat-detector is quite easy to use, it requires some training and experience to interpret what it picks up, and the Longworth traps can only legally be used by a trained and licensed operator.

Description	**Availability**	**In care of**
6 compound microscopes	occasional use	Hunterian Museum - Geoff Hancock
10 Longworth mammal traps	occasional use	Countryside Ranger Service
Batbox Duet bat detector	occasional use	RB Weddle
2 Garmin GPS (basic)	occasional use	Anne Orchardson, Ian McCallum
2 Garmin eTrex GPS	2 in use	R Weddle, Sarah Longrigg
Skinner moth trap (mains operated)	In use	Anne Orchardson
Heath moth trap (battery operated)	occasional use*	RB Weddle
2 pond nets: large / small	occasional use	RB Weddle
2 sweep nets: large / small	occasional use	RB Weddle
Butterfly net	Frequent use	RB Weddle
Beating tray	occasional use	RB Weddle
Emergence Traps (80)	available	RB Weddle
3 sorting trays	occasional use	RB Weddle
4 remote video cameras	available	RB Weddle
Data loggers	not available	Anna Muir

* there are additional Heath traps owned by Butterfly Conservation SW Scotland, which are available for use by GNHS members.

If you'd like to borrow any item, contact me; or I can put you in touch with the current holder of the equipment.

Old News on the Wheat Bulb-fly **Richard Weddle**

Ron Dobson told me about this some time ago and indicated his agreement to my publicising it.

At www.britishpathe.com/video/wheat-bulb-fly there is a short video-clip showing Ron collecting and marking specimens of the Wheat bulb-fly some 50 years ago, as part of a research project at Rothamsted Research Station. The fly in question now has the much more pronounceable name of *Delia coarctata.*

Claret ash (*Fraxinus angustifolia* ssp. *oxycarpa 'Raywood'*) **Bob Gray**

Ash trees (*Fraxinus* spp.) belong to the olive family and include lilacs, privets, jasmines and forsythias. They all possess opposite buds and leaves.

The narrow-leaved ash (*F. angustifolia*) is native to the western Mediterranean and northwest Africa and was introduced from the former area at the beginning of the 19th Century. Its crown is distinctively feathery in appearance. Unlike the common ash (*F. excelsior*) its opposite buds are brown rather than black. Occasionally described as ssp. *angustifolia* its slender leaflets are hairless, which distinguishes this from *F. angustifolia* ssp. *oxycarpa* (Caucasian ash) whose leaflets have hairs beside the midrib for a short distance from where it forks from the rachis (the central stalk of a pinnate leaf). This latter subspecies grows naturally between Romania and Iran.

Several narrow-leaved ash can be observed in Glasgow's West End, whilst in Fountain Gardens, Paisley there is a specimen of 21 m in height which is also the biggest in Scotland for GIRTH. Near the entrance to Govan underground station at the junction between Napier Road and Govan Road as well as in Napier Road itself may be seen about fourteen specimens of ssp. *oxycarpa* 'Raywood' (claret ash), which is a cultivar raised in 1928 in the Raywood Gardens, Adelaide, Australia and introduced to this country by Notcutts Nursery.

Fraxinus Angustifolia 'Raywood'
Photo by Junella McKay, October 2007

It is planted as an ornamental on account of its spectacular royal purple autumnal foliage colour and was awarded the RHS Award of Merit in 2002. In 1993 eleven Claret ash were planted in Carriagehill Avenue, Paisley, one of which is illustrated on this Newsletter cover. Older trees are rare since their brittle limbs tend to break as they mature so that the tree is not suitable for locations used by heavy traffic or pedestrians.

The biggest 'Raywood' in Scotland is recorded in Cooper Park, Elgin. Its height was measured in 2009 as 11 m and its girth 103 cm. The English champions are in Suffolk (height), planted in 1935 as a Jubilee tree, and Oxford (girth). There is therefore a large geographical gap so Bob Gray would be delighted to hear from

anyone who comes across any example of this (relatively) unusual tree or, indeed, any sizeable example of the narrow-leaved ash, with details.

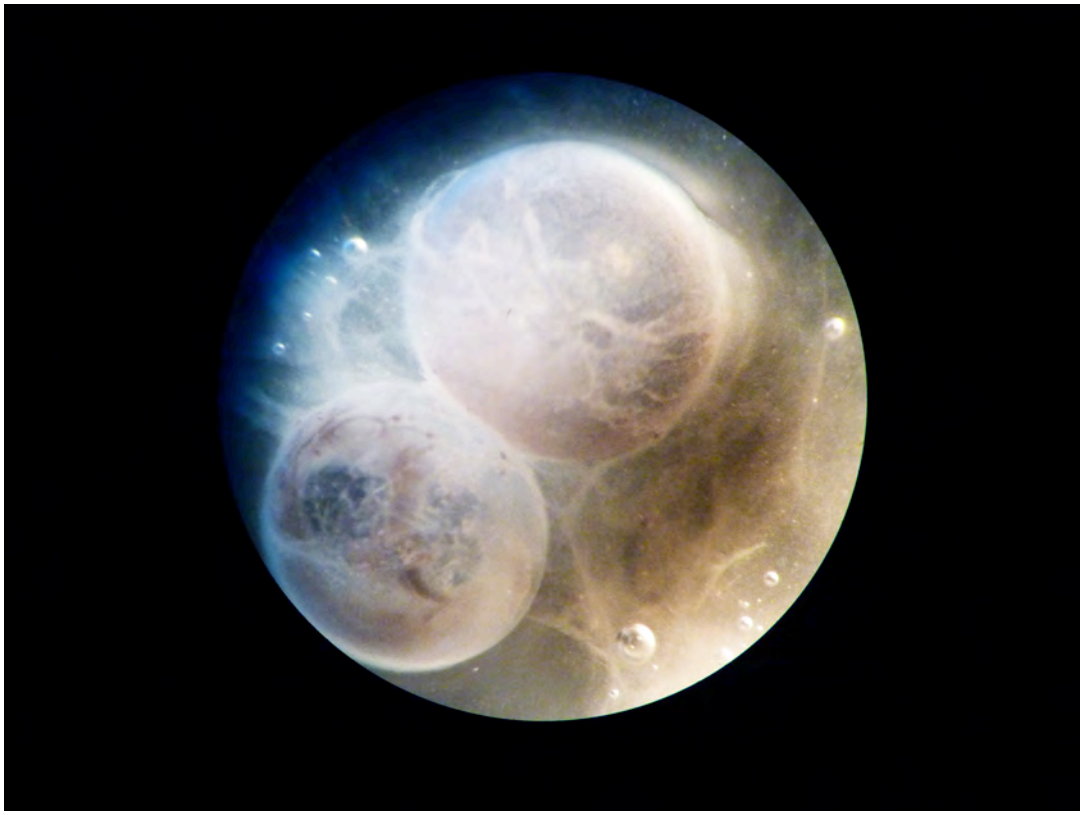
PhotoSCENE Photographic Competition **David Palmar**

Prior to the Members' Photographic Night on 10th January 2012, the results of the first photographic competition were announced, and three prizes awarded.

1st Prize was awarded to Anna Muir, with a superb photo of Palmate Newt.

2nd Prize was John Hume, with a beautiful landscape picture of the Dubh Loch.

3rd Prize was also awarded to Anna Muir, for a photomicrograph of two Common frog eggs infected with Saprolegnia fungus, somewhat reminiscent of the Moon!



Members are encouraged to enter next year's competition, details of which will be announced later. It is probable that an excursion will be held to help members to take photographs for the competition.

Members' Photographic Night **David Palmar**

Members made their usual good contribution to the Photographic Night, which was held on 10th January 2012. The talks consisted of:

John Lyth – Fungi on Arran
Bob Gray – Trees in Alexandra park
George Paterson – Hill and Mountain Wildlife, given by David Palmar as George had to work that night
Morag Mackinnon – New Zealand
Peter Macpherson – Spain
David Palmar on the excursion to Scene in May 2011

General Correspondence to the General Secretary:

Next Newsletter - copy to David Palmar by 22nd March 2012 please.

Please send contributions by email, preferably as .rtf, .doc or .docx (Word 2007) format. If you have time, please italicise taxonomic names, and use **Verdana** font, size **12 points**. If sending photos, please submit only a few, and make them under 100Kb each for emailing) and as **jpg files**, **not** part of a Word file.