GLASGOW NATURAL HISTORY SOCIETY NEWSLETTER

December 2005

David Palmar (Newsletter Editor)

Next Newsletter Deadline 1 February 2006

GNHS is a Registered Scottish Charity Web-site: http://www.gnhs.freeuk.com/

FORTHCOMING MEETINGS — Morag McKinnon

Do not miss **Wed 30th November** in the Western Infirmary Lecture Theatre, starting at **5.00pm**.Prof. Nick Davies is giving this BLB Lecture "Cuckoos versus hosts: an evolutionary arms race"

The **Christmas Dinner** is in the Glasgow University College Club, 7.00 for 7.15pm on **Tuesday 13th December**. If you wish to come, **Hazel must know by Sat 3rd December** to give numbers to the club. The after dinner talk should be an interesting one with our own June McKay giving the talk on Botanising in Sichuan. **Your booking form is enclosed with this Newsletter.**

The Paisley International Slide Show is on Tue 10th January at 7.15pm.

Norman Tait talks about Illustrating Natural History – the latest techniques on Tue 31st January at 7.15, preceded at 6.30 by a tutorial on botanical drawing and painting

February 21st at 7.15pm sees the AGM, followed by Roger Downie's paradoxical frogs.

ADDITION TO WINTER PROGRAMME

At 7.15 on Tue 28th February there will be an extra talk by Dr Bob Johnson, Naturalist and Photographer who is going to be staying with Prof. Jim Dickson at the end of February and has agreed to give us a talk on the Alaskan area where he and Jim have been working. So put the 28tth February in your diary.

NATURAL HISTORY COURSES AT DACE — Dominic McCafferty

Would you like to take your interest in natural history further? The Department of Adult & Continuing Education at the University of Glasgow offers a range of science courses for part time study.Courses are taught during the daytime, evening and at weekends.This year's programme includes marine biology, ecology, botany, astronomy and geology.The DACE programme also offers a wide range of courses including languages, art, history, music, literature and social sciences.

For further information or to request a brochure please contact DACE on 0141 330 1835, email dace-query@educ.gla.ac.uk or visit www.gla.ac.uk/adulteducation

MYRIAPOD AND ISOPOD MEETING **Glyn Collis**

The Annual Field Meeting of the British Myriapod and Isopod Group will be held at the Scottish Agricultural College, Auchencruive, Ayr, on Friday 7th and Saturday 8th April 2006. GNHS members who are interested in and/or would like to know more about centipedes, millipedes or woodlice are most welcome to come along.

THOUGHTS ON BIRD 'FLU **Norman Grist**

Avian influenza, much in the news but primarily a threat to birds, is another example of evolution in action, involving our own species as a side-effect. We now realise that Type A influenza viruses originally evolved as infections of the gut of water birds (ducks & others), spread mainly through excreta-contaminated water to other birds, aquatic and terrestrial mammals.

Each of the widespread subtypes is adapted mainly to a particular host species or family of vertebrates, (15 of them affecting birds), but not easily infecting other species. Subtypes are identified by their "H" and "N" components: H = Haemagglutinin, involved in attaching virus to cell surface; N = Nucleoprotein, in this case RNA specifying the composition of the virus. Chance errors in replication of RNA during multiplication cause random variations expressed in the antigenic "drift" that requires influenza vaccine to be changed from time to time.

Also, influenza genes exist in 8 portions (analogous to our own DNA chromosomes). If two influenza viruses simultaneously infect the same host cell, mixing of these can produce hybrid viruses with contributions from each parent. This "reassortment" is the basis of periodic major antigenic "shift" producing viruses already adapted to humans but with antigens not previously encountered by our species against which we have no immunity. We can then be open to epidemic spread, provided there is effective cross infection, initially from bird to human and then on from human to human, perhaps as the feared world-wide pandemic if the hybrid is also highly virulent to humans. So far, it has proved difficult for these avian viruses to infect humans and there is little evidence of their spread between persons.

Up to now, influenza viruses from birds dangerous to humans have been of H5N1 or H7N1 subtypes, though not all of these are highly virulent. Despite massive exposure of many persons to H5N1 viruses in the recent epizootic in S E Asia, the number of their deaths has been relatively small. This suggests that many or most humans are "constitutionally" (genetically) poorly susceptible or resistant to H5N1 viruses, perhaps lacking the precise pattern of receptor molecules on their cell surfaces to match their opposites on the viruses as required for these to attach and start the complex processes of invasion. Biodiverse native wild bird populations have co-evolved with these viruses for thousands or millions of years to reach mutual tolerance by natural selection. By contrast, relatively inbred farmed birds are more susceptible, as recently seen in Viet Nam. Also crowding in farms helps infection to spread.

If the current H5N1 virus reaches us here, maybe most of us would be lucky - genetically not susceptible - or maybe not? Pandemic spread could cull our own population, removing those genetically susceptible but leaving those with

"insusceptible" genes to continue the species - "survival of the fittest" (effective vaccines and antivirals might just slow this process). Infection is already in Europe. Bird migration is mainly north-south, but human trade and travel provide other opportunities - as for instance the two live Crested Hawk-Eagles smuggled illegally in cabin baggage from Thailand to Brussels in 2004, both of them infected with H5N1 virus like the parrot that recently died in quarantine at Heathrow. These incidents confirm the danger from international transport of live animals from their native environments for human pleasure or profit. Improved control or banning the international trade in exotic animals might be one benefit to come out of the situation. Avian influenza remains primarily a threat to birds and seriously the poultry industry, but is unlikely to affect our own population unless a series of improbable events occurs.

URBAN SQUIRRELS & OWLS **Norman Grist**

In response to Richard Weddle's question in the last Newsletter, Grey Squirrels around Hyndland Court were regularly seen in 1985-86 (one) increasing to 4 in 1987, settling at 2, 3 (1990), 3 to 5 (1991), between 3 and 5 to 1996, transiently boosted to 12 or more in a brief "gathering" *The Glasgow Naturalist* (1998) 23(3): 67. Counts then settled around 4 until 2003 (2 to 3), 2004 (3 to 5) and around 3 so far in 2005. Their only predation of nestling birds I actually saw years ago targeted magpies. They use dried bark stripped from dead branches for nesting material, but I have not noticed harmful damage to our trees (maybe too well fed?) - in springtime it is the woodpigeons and corvids that attack tree buds.

The current BTO Tawny Owl Survey drew my attention to the regularity with which we heard and sometimes saw these birds here from 1970 until recently - my last hearing recorded in August 1997. Analysis continues - slowly!

MONKEY PUZZLE 'NUTS' IN MILNGAVIE **Bill Hansen**

Outside our doctor's practice in Milngavie is a large *Araucaria araucana*, Monkey Puzzle, and for the nearly 20 years I have lived in Milngavie I have only observed female strobili on it. This year to my surprise, one day in September, I found some seeds underneath the tree and over a week or so gather nearly a hundred seeds. This, at first, surprised me as there is no other mature Monkey Puzzle in the area and it is supposed to be diocious. So why has this happened, seeds in 2005?

Well, the tree can occasionally be monoecious, Hillier's Manuals of Trees and Shrubs. This is likely to be the case with the Monkey Puzzle in Milngavie where a branch with the male strobili near or above the branch(s) with female strobili. So when were the male strobili formed? This must have been in 2002(3) as the cones take two to three years to mature.

The interesting thing about this is, that the seeds were only found on less than a quarter of the canopy area which suggests that there may only have been one or maximum two female cones on the tree below or near the male stroboli. According to C. Stace in New Flora of the British Isles, the size of the female cone is c.15-20 x 12-15 cm so it is likely that maximum two female strobili (cones) are involved. The seeds, minus the style which is still attached to the seed, are torpedo shaped c.3

cm long and 1.5 cm at the widest point where it is flattened where the style is attached.

Alan Mitchel, in his book 'Alan Mitchel's Trees of Britain (1996) on page 36, says: 'Only one tree, which bears flowers of both sexes, is known to-day..' and later tells about a monoecious specimen which suddenly stopped producing female strobili. So what has happened in Milngavie, is it a one-off or has it just been missed earlier? We just have to wait and see.

P.S. Visited the site on 17th October, picked up a few seeds and looking at the crown from a different angle discovered four ripe cones one of which was starting to disintegrate. The cones were all at one level and within 1.5 m approx. and directly above where the first seeds were collected. In all there might have been 5-6 cones.

FLATT MOSS, 20th July 2005 **Peter Macpherson**

Five members attended this field meeting south-east of East Kilbride, one aim of which was to search for pondweed hybrids in a pond situated in an old limestone quarry. Recording was also carried out in the surrounding area and on the approach track.

The leader wore waist-high waders and a grapnel was thrown in at many likely areas, but although we identified *Potamogeton crispus* (Curled Pondweed), *P. natans* (Broad-leaved Pondweed) and *P. perfoliatus* (Perfoliate Pondweed), no definite hybrids were detected. However, a number of specimens was taken and will be shown to a referee.

A total of 144 taxa was recorded. There were 12 species of grass, three sedges and three rushes, plus the compact flowering Soft-rush (*Juncus effuses* var. *subglomeratus*).

In relation to the pond, we identified one hybrid, that between the Marsh and Common Ragworts (*Senecio aquaticus* x *S. jacobaea*). As would be expected in such a habitat, we saw Common Spike-rush (*Eleocharis palustris)*, Marsh Willowherb *(Epilobium palustre*), Yellow Iris (*Iris pseudocorus*) and Reedmace (*Typha latifolia*). Alternate Water-milfoil (*Myriophyllum alterniflorum*) is rather more rare and it is unusual to find Branched and Unbranched Bur-reed (*Sparganium erectum* [ssp. *Neglectum*] and *S. emersum*) growing together.

FUNGI OUTING, 2nd October 2005 **Morag Mackinnon**

This outing to the Clyde National Nature Reserve north of Lanark at Cleghorn Glen, which was led by Graeme Walker of SNH, was a little disappointing in that we only found about 80 species. However it was a most interesting outing through a spectacular gorge and some of the specimens we found were excellent examples. Jew's Ear, for instance, was most photogenic and one I had not previously seen. We also found a beautiful wren's nest, like a miniature Andy Goldsworthy sculpture; and down by the river there were trees whose leaves had been reduced to skeletons by the most brilliant emerald green beetle- I haven't found out its name yet.

BARON'S HAUGH, 24th September2005 Ian McCallum

This is an account of a combined outing of the Glasgow Natural History Society and the Edinburgh Natural History Society to the RSPB Reserve of Baron's Haugh, which lies beside the River Clyde near Motherwell. The Reserve comprises more than 100 ha of good mixed habitat and has had over 170 recorded bird species.

The party which comprised 12 Edinburgh members and 6 Glasgow members met up about 11.00 hrs in the reserve car park, on a fine sunny day. There was also a dog. If it had been a collie it might have managed to keep the party together.

The party started at the Marsh Hide which is normally very productive. However, it proved to be disappointing - possibly due to the local peregrine having paid a visit prior to our arrival. It was from this hide the previous day that Ian had watched the elusive spotted crake. Unfortunately, on the day of the outing it did not show. The route which was clockwise round the Haugh, via the White Walk, took us along the edge of Dalziel Wood, which had the most northerly breeding nuthatches this year. In the wood a late chiffchaff was calling.

Where the path crosses the Dalzell Burn, Butcher's- broom *Ruscus aculeatus* was growing. One of the party explained that the broom had reputedly been used for scrubbing down butcher's chopping boards. Nearby was a specimen of the tulip tree *Liliodendron tulipifera.* At the bottom of the Chestnut Walk next to the graveyard, oak trees were examined. Turkey oak *Quercus cerris* and the rarer scarlet oak *Quercus coccinea* with its odd shaped acorns.

At the River Clyde it had been planned to walk upriver to Carbarns Pool for lunch, but as the time was running out, the party continued to the Centenary Hide for lunch. From the hide there was a good selection of duck and waders including a female pintail, knot, shoveler, teal, wigeon, mallard, redshank, cormorant, dabchick, heron, lapwing, mute swan, gadwall and snipe. Other birds seen were buzzard, kestrel, wren and swallow.

Because it was a breezy day, dragonflies and butterflies were scarce, although a small copper butterfly was seen in the car park.

After lunch the party continued round the loch to the Phoenix Hide and then on to the Causeway Hide where the lucky members of the group had a glimpse of the elusive water rail.

The party returned to the car park about 3.30 hrs prior to going on their separate ways.

JEFFREY ROOM, MITCHELL LIBRARY, 26th October, 2005 Bob Gray

8 members of our Society accompanied by two members from Edinburgh NHS attended this visit. Liz Carmichael, education officer in the Mitchell, welcomed us.

It was pointed out to us that the library was originally housed in 1877 in Ingram Street followed by a move 1891 to Miller Street before finally being housed in the present building in 1911, the site being chosen at least partly because it is located

in the direction of the University of Glasgow. Since the burning of St Andrew's Halls in 1962 the library has occupied the whole of the island site. William B Whitie was the architect chosen to design the existing structure, although it is interesting to note that the famous dome was apparently added as an after thought. Wylie & Lochhead built the bookshelves in the library in mahogany.

Robert Jeffrey, a wealthy textile mill owner, bequeathed his collection of mainly historical books to the library on condition that the books were kept together, using his own oak bookcases in a room dedicated for the purpose (lined with oak panelling).All his books are labelled green, red or gold with Jeffrey's own 'device', a rising sun, which also, together with griffin head and feet, adorns the oak bookcases and plaster work around the room. The Jeffrey library operated as a separate entity for some years until it was amalgamated with the rest.

Containing some 1.5 million books the Mitchell is considered to be the largest public reference library in Europe. It is largely closed access, the only open access being to newer material. Post 1976 books are catalogued on-line: www.libcat.glasgow.gov.uk

Although our visit took place in the Jeffrey Room, the books we were shown were rare natural history volumes not belonging to the Jeffrey collection.(This sumptuous offering is being held over for a future occasion, perhaps next year.)The books we viewed are listed in the order in which we looked at them.

Exotic Flora. William Hooker, 1825.
Birds, 3rd Volume. Audubon. 1822-1827 Audubon travelled through the USA, shot birds, then wired and painted them. He raised a subscription list, not in the USA, but in Edinburgh where Lyell engraved the first five plates of volume 1. In fact there were many Scots subscribers to the first few volumes.
Gleanings of Natural History. George Edward, 1758.
English Entomology: Beetles. Thomas Martin, 1792.
Exotic Botany. James Edward Smith, 1804. (*ex libris* Thomas Hopkirk – Glasgow Botanic Gardens founder)
Natural History of Florida and the Bahama Islands. Mark Catesby, 1771.
Botanic Garden. Sydenham Edwards, 1812.
Natural History of Uncommon Birds etc. George Edward, 1743.
Fish & Fish Ponds. Roger North, 1820.
Beautiful Seaweeds. James Cook, compiler, of Paisley, 1877. Original specimens!
Flowers of the Holy Land. Apparently bound in olive wood, with photographs and pressed flowers (!). Hand made, not published.
Plants on the Surface of the Globe. Dissertation on plants having medical uses. In French, 1787.
Gerard's Herbal. 2nd edition by Thomas Johnson, 1633 (first published 1597).
The Orchid Album. Benjamin S. Williams *et al.*, 1882-1897. Prints lithographed by Walter Fitch.
Roses. Andrews, 1805.
Campi Phlegraei. William Hamilton, ambassador to Naples and husband of Emma of Nelson fame, wrote this treatise on volcanoes. Beautifully illustrated views of Vesuvius erupting by the artist Valris, 1776.

Clearly there was something on view to satisfy most natural history interests and the Society is indebted to Joyce Alexander for arranging the visit and to Liz Carmichael for her entertaining presentation.

BEAN GEESE AND GARDEN BIRDS MEETING **Morag Mackinnon**

October 11th was a double treat for bird enthusiasts and both John Simpson who gave us an excellent tutorial on Bean Geese and where to find them, and Jacqui Kaye made us realise how important it us for us to watch the birds in our garden and how to help them.

GNHS EXHIBITION MEETING, 20th September 2005 **Bob Gray**

1. Giant polypore, *Meripilus giganteus*, from a horse chestnut stump in Glasgow's West End. Bob Gray.

2. An 'exceedingly rare' water starwort, *Callitriche palustris*, specimen from the Endrick mouth. J. Mitchell and P. Macpherson.

3. Iceland sea level alpines, 2005 and seabird photographs. Plants – June Mackay, birds – Peter Price.

4. Study of endemic beetle, *Ceutorhynchus insularis*, on St. Kilda. Geoff Hancock and Jeanne Robinson.

5. The Kentish glory moth, *Endromis versicolora*, from east and central highlands, extinct in England. John Knowler.

6. The monarch butterfly, *Danaus plexippus*, life cycle in north and central America and food plant, milkweed, *Asclepias* spp., samples of fruit follicle and parachute seeds. Bob Gray.

7. Recent sightings of basking sharks, *Cetorhinus maximus*, in the Inner Hebrides and River Clyde. Bob Gray.

8. Feather samples of great horned owl and bald eagle from Delta, Manitoba and jay from Loch Lomondside. Sandy McNeil.

9. Natural history photographs mainly of birds. David Palmar.

10. Books from the library of Nancy Craib, deceased.

THOMAS KINSEY BEQUEST **Roger Downie**

GNHS has been left £8000 by the late Thomas Kinsey. Council has considered how to use this money and has decided to establish it as an equipment fund. Members or groups of members who have a need for some natural history equipment (bat detectors, moth traps, GPS etc.) aimed at furthering the aims of the Society can apply for a small grant from this fund. Applications should be made by letter (we may develop an application form later) to the Treasurer. Applications will be

considered by the Blodwen Lloyd Binns Bequest Committee which meets four times a year (September, December, March and June).

Council's intention is that the equipment should be aimed at assisting with some project or other rather than being purchased because it might be a nice thing to have. So the application should make clear what the purpose is. Applicants should also note that the equipment remains the property of the Society: it should be returned to the Society at the end of the project, and it is the applicants' responsibility to maintain the equipment while he/she is using it.

This equipment fund is not intended for major items. We would not normally expect an application to exceed £500.

A VERY SCOTTISH FLOWER **Willie Porterfield**

Whilst walking in the Campsies, going to Earl's Seat from Glengoyne Distillery, I came across a low growing shrub by the path, on stony ground, at a height of around 400 m. After taking a sample home, I identified it as Wild Azalea, *Loiseleuria procumbens,* also known as Mountain or Trailing Azalea. It has small pink flowers, and small oblong leaves. In Collins wild flower book its habitat is listed as arctic heath and mountaintops. Can this be true? I'm certain I have not misidentified this plant. Has anyone else come across this shrub? If so I would like to hear from them.

FROM THE REVIEWS EDITOR **Bob Gray**

Books received in exchange for Reviews in *The Glasgow Naturalist*:

A New Key to the Freshwater Bryozoans of Britain, Ireland and Continental Europe, with notes on their ecology.

Timothy S. Wood and Beth Okamura

Freshwater Biological Association Scientific Publication No. 63 2005 £16.00

***A guide to the identification of genera of chironimid pupal exuviae occurring in Britain and Ireland (including common genera from Northern Europe) and their use in monitoring lotic and lentic fresh waters*.**

Ronald S. Wilson and Leslie P.Ruse

Freshwater Biological Association Special Publication No. 13 2005 £20.00

Fossil Invertebrates **Paul D. Taylor and David N. Lewis**

Natural History Museum 2005 £25.00

This book is designed to unravel and interpret the rich fossil record of invertebrates. Ideal for any undergraduate or amateur fossil enthusiast, it covers all major groups of fossil invertebrates and provides illustrated descriptions of selected genera. The seas of the ancient earth teemed with ammonites, corals, sponges, molluscs, crinoids and trilobites. The sheer abundance of these fossils reflects the fact that many invertebrates, with solid, decay-resistant shells, were well suited for preservation. Some have close relatives living today and the book demonstrates how the fossil record can shed light on today's fauna.

Newsletter contributions are welcomed from all members, and should preferably be sent to the email address on the front cover, or on a floppy disc. Please do not type it all out on a computer, then send me a bit of paper!

To help the editor, it's really best if they are in plain text, i.e. the ordinary contents of the email is best, or a .txt file, rather than a Word document, as they all have to be reformatted anyway.

If you really feel you must send a Word document, please use the Verdana font at a point size of 12. Don't use any other fonts or styles, spell check the document and keep all the text left justified. Thank you. David Palmar