GLASGOW NATURAL HISTORY SOCIETY NEWSLETTER

February 2023

David Palmar
(Newsletter Editor)

Next Newsletter Deadline
22 March 2023

GNHS is a Registered Scottish Charity

Talks Programme: February to May 2023 — Roger Downie

As mentioned in the November Newsletter, we wondered whether any members felt excluded by the return to an in-person format. We received a few replies from people who wanted to keep to the on-line method on grounds of health or mobility.

Overall, we are keen to have in-person meetings because they enhance the social side of the Society's activities, but we have decided to have two of the forthcoming meetings as 'hybrids' i.e. both in-person and on-line, at least partially to meet the needs of members who cannot attend.

We cannot do this for every meeting because of the high cost: the University of Glasgow only has a few lecture rooms that are suitable for hybrid meetings, of which the Graham Kerr Building lecture theatre is one. We will be interested to find out how many use the on-line facility, and whether they find it successful. This means that the lecture locations for the next few meetings need to be checked carefully. As usual, meetings are on the second Tuesday of each month, from 7pm.

Tuesday 14th February: Graham Kerr Building LT1 (Hybrid meeting: the on-line link will be emailed to members a few days before the meeting). Photographic Night, led by Andy Wilson. Results of our annual photographic competition, plus any interesting pictures members wish to show. Please contact Andy in advance if you are willing to contribute a short presentation. (photoscene@gnhs.org.uk)

Monday 6th March: Graham Kerr Building LT1 (in-person only), 6pm. Exploration Society Report-back. Short talks on the 5-6 summer expeditions supported by the BLB Bequest. This is an Exploration Society meeting, but GNHS members are welcome to attend. Refreshments available for purchase.

Tuesday 14th March: Graham Kerr Building LT1 (Hybrid meeting: the on-line link will be emailed to members a few days in advance). David Palmar on The Falls of Clyde; followed by the Society's AGM. AGM papers will be emailed in advance.

Tuesday 11th April: Boyd Orr Building, level 4, lecture theatre A (in-person only).
Andrew Brownlow of the Scottish Marine Animals Stranding Scheme (SMASS), which is now based at the University of Glasgow, on the work of the scheme.

Tuesday 9th May: Boyd Orr Building, level 4, lecture theatre A (in-person only)
Two short talks-

a) Jonathan Yardley on tick-borne diseases and their presence in the Scottish deer population.
b) Emily Waddell on restoring resilient ecosystems: future restoration should enhance ecological complexity and emergent properties.

Amphibians and Reptiles Conference, Saturday 3rd June
As a follow-up to the successful conference held in 2018 (with Proceedings published in *The Glasgow Naturalist* 27 Supplement), a small team of GNHS and Clyde Reptile and Amphibian Group members is organising a one-day conference on 3rd June, as part of Glasgow Science Festival. This will be held in the Graham Kerr Building. Please note the date and watch out for further details.

Summer Social - most likely Tuesday 13th June. Details in the next newsletter.

Talks Programme 2023-2024 — Roger Downie

This is the time of year when I begin to issue invitations to speak to the Society next season. If you have any suggestions, please send me names and contact addresses if possible. Thanks.

AGM Information — Alison Park

Our Annual General Meeting will take place on Tuesday 14th March after David Palmar gives his illustrated talk on the Falls of Clyde. The full session, starting at 7pm, will be run in a hybrid format so you will have the option of EITHER attending at Glasgow University's Graham Kerr Building OR joining online via Zoom. We hope this arrangement will enable a good number of our members to attend the talk and participate in the important business of the AGM. As usual, there will be elections for Council members to help run the society and make longer-term decisions on the Society's future direction. We would be delighted to hear from you if you might consider nomination for a Council position. For further information on Council tasks, or if you have any other queries relating to the AGM, please contact Alison Park.

Group Meals before Meetings — Alison Park

Since returning to in-person lectures we have reinstated the practice of inviting the speaker(s) to a meal with GNHS Council and members. The meals are normally held at 5:30pm in nearby Café Andaluz and, with a subsidy from the BLB fund, the cost is set at £10 per head.
Any GNHS member who may wish to join pre-lecture meal(s) should inform Alison Park and we will ensure that you receive email invitations to enable you to request a seat at the table on future date(s).

2023 Subscriptions — Richard Weddle

Subscriptions fell due on January 1st 2023 (except for those who have joined since June 2022). Members who pay by standing order need take no action; others will receive a subscription renewal form either as an email attachment or in the envelope containing this newsletter.

If you do receive a reminder, and will be paying by cheque, it would still be best to send it to my home address: 89 Novar Drive (1/2), Glasgow G12 9SS, as our visits to the Graham Kerr Building are less frequent than they were pre-Covid. This information will be given in the reminder, but I thought it worth repeating.

BRISC / GNHS Bursaries — Richard Weddle

Since 2009, BRISC (Biological Recording in Scotland) and GNHS have been offering bursaries towards attending a training course in natural history field studies. These bursaries are open to anyone living in Scotland who wants to improve their skills and contribute to biological recording.
From 2023 we are pleased to be able to offer bursaries of up to £400, up to £100 of which can go towards transport costs, to make it easier to attend courses, particularly those outwith Scotland.
The closing date for applications is January 31st 2023.

An application form, and full details of the bursaries on offer can be found at www.brisc.org.uk/bursaries.
The bursaries are not restricted to GNHS members, so please feel free to forward this information to anyone you think may be interested.

Big Garden Birdwatch — David Palmar

Not a GNHS event, but this year's Big Garden Birdwatch, organised by the RSPB, runs from 27th to 29th January, and you don't need a garden to take part! If you don't have one, you could do the survey in a park or along a canal or river.

Taking part is as easy as 1,2,3
1. Watch the birds around you for one hour
2. Count how many of each species of bird lands on your patch
3. Go online and tell us what you saw

https://www.rspb.org.uk/get-involved/activities/birdwatch/

Recent Deaths of GNHS Members

Iain Paton Gibson — **Dr Bernie Zonfrillo**

Iain was born on 11th May 1951 in Paisley, Renfrewshire. He grew up in town but later moved to the outskirts and closer to his favorite "patch" Paisley Moss, a site he continually visited, even in recent years. There he developed an interest in migrant waders such as Green Sandpiper, Jack Snipe and Wood Sandpiper, the latter a species he claimed as his "favorite bird". A healthy number of species was added to the Moss's list. It was at the Moss where he first met two life-long friends, Hector Galbraith and George White who helped boost his local knowledge and new

species. As an eleven-year-old, Iain kept detailed notebooks on everything seen at Paisley Moss and was further encouraged when he won a Paisley Museum Natural History Society Prize for his "Nature Notebooks" on the Moss. Around 1963 he met up with Ronnie Jeffrey (who notably had a car!) and others. His membership of the Scottish Ornithologists Club and Glasgow Naturalists introduced him to yet more enthusiasts and friends like Bernie Zonfrillo and Tommy Daniels. Visits to the east coast were mini expeditions at weekends but 6 large people in a Volkswagen proved a little claustrophobic. The local patch was thereafter considered more important!

Iain also met his partner Alison Beck while working as Countryside Rangers at Muirshiel Country Park and there began a relationship lasting almost 50 years. As a talented Art School Graduate, Alison was often roped in to help illustrate Clyde Bird Reports, an endeavour Iain was largely responsible for inaugurating and developing to the present high standards.
Like many of his age, Iain developed a keen interest in politics, and in social justice. And like many he also detested the destruction of wildlife by the hunting and shooting fraternity. He was never slow in denouncing such, often criminal, activity.

As a bird ringer, he had particularly fond memories of the Isle of May. On one autumn weekend on Isle of May, Hector Galbraith and Bernie Zonfrillo caught no less than 3 Great Grey Shrikes; one particularly vicious bird was taken back to the Low Light to show Iain and ask him to hold it for photos. This he did and was soon bloodstained by the bird that ripped at his fingers until he let it go, much to our amusement, as it had done the same to us!

In his later working days, he joined Glasgow City Council, in the then Parks and Recreation Department. This proved extremely fortuitous. He was able thus to raise the status of places such as Hogganfield Loch and Robroyston Marsh to that of Local Nature Reserves. He and his dedicated team of 6 made a big difference to local conservation in the Glasgow area. The benefits are still visible to visitors who can now see and photograph species such as Whooper Swan, Goosander and Gadwall and many other waterfowl all at close range.

In other areas, he converted lifeless "duck ponds" into breeding areas for Grebes and other waterfowl.
Iain was an honorary member of the Scottish Ornithologists Club, an honour he cherished and deserved. In 2010 he had become the longest serving SOC Local Recorder and was Local Recorder for the entire Clyde Region from 1975 being also Editor of the Clyde Bird Report from 1975. He produced the annual journal Clyde Birds, a huge collaborative effort with Val Wilson, from 1990. He served on many committees in Glasgow and Edinburgh contributing to and shaping policies on ornithology in Scotland.

In what spare time he had, he surveyed the heather moors of Clyde Muirshiel Regional Park for its Hen Harriers and unfortunately documented the decline of 11 pairs to zero at present. For Iain's sake an effort should be made to repopulate this area.
Dialysis finally took its toll on 23 October 2022. He is survived by his sister Sheila, and Alison Beck.

John Lyth **Roger Downie**

The Society was saddened to receive news of the death of John Lyth on 4 th January, aged 80. John had been a member of GNHS since March 1958, a period of nearly 65 years.

John's natural history interests were primarily botanical, and he and his sister Margaret were members of the team who contributed to the plant surveys which resulted in the publication of *The Changing Flora of Glasgow* (2000). John contributed 2,459 records to the Glasgow Museums biological records database. John and Margaret also led excursions in the area around their home, and John acted as the Society's publicity convenor for a good number of years.

A feature of the Society's Christmas socials on many occasions was the appearance of John and Margaret, exotically attired, reciting or singing a specially written topical poem. Even more welcome was the delicious Christmas cake that they brought. John is survived by Margaret, to whom the Society offers condolences. A fuller obituary notice is in preparation.

Peter Meadows **Roger Downie**

We are sorry to report the death of Peter Meadows at the age of 86. Peter was a marine biologist based in the University of Glasgow's Zoology Department from his appointment in 1963 until his retirement in 2001. He continued as an honorary member of staff until recently, focusing with his partner Azra on sustainability and educational issues in North Africa and especially Pakistan. For GNHS, Peter with Azra acted as editors of *The Glasgow Naturalist* for the four parts of volume 24 (2004-2007); he also published papers in the journal and presented the occasional talk to the Society. Peter was an enthusiastic teacher and diver, and will be remembered by the West of Scotland Scuba-diving community. Peter is survived by his partner Azra, to whom we offer our condolences.

Ian McCallum **Roger Downie**

We are sorry to report the death on 13th November of Ian McCallum. Ian and his wife Joyce, who predeceased him, both joined the Society in 1978. Ian served on GNHS Council in several capacities over the period 1994-2005: two terms as vice-president, councillor, and section convenor for ornithology and excursions. Ian also contributed book reviews to *The Glasgow Naturalist.* He contributed 1300 records to the Glasgow Museums biological records centre. Ian is survived by his daughters Morar and Shona, to whom we offer condolences.

City Nature Challenge

Not a GNHS event, but members might like advance notice of the 2023 City Nature Challenge, which takes place in 2 parts.

April 28th to May 1st: Taking pictures of wild plants and animals.

May 2 - May 7: Identifying what was found.

Results will be announced on Monday May 8th.

For further details see the next newsletter and this link:

https://citynaturechallenge.org/

Excursion Programme Alison Moss

The excursion programme is pretty well mapped out thanks to members making helpful suggestions and a willingness to be "leader". I am at the stage of choosing optimum dates for a selection of sites. Details in April newsletter.

Call for photography: Pollution and the Kelvin — Robyn Haggard

GNHS will be taking part in the annual Kelvin in the Kibble display in the Kibble glasshouse at the Glasgow Botanic Gardens from 16 to 30 May 2023. This year's theme is pollution. We would like to invite GNHS members to submit their own photographs about pollution and the Kelvin to include in our display.

If you would like to submit any photographs, please send them to Robyn Haggard by **Sunday 16 April**. Photographs of a suitable resolution and quality for display will be printed out with appropriate credits, so please include the title of your photograph/s and how you would like to be credited and the year the photograph was taken. For example, *Plastic in the River Kelvin* © Robyn Haggard 2022.

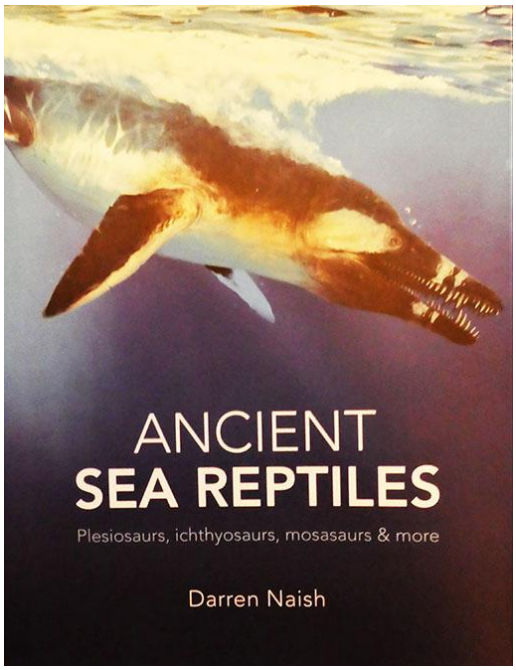
Pollution has been defined as "the presence in or introduction into the environment of a substance or energy which has harmful or poisonous effects".

iNaturalist

If you use the app or website **iNaturalist** to record your sightings, they would like to highlight that all users are required to confirm their email address by the end of June - see https://www.inaturalist.org/blog/73428-email-addresses-for-inaturalist-accounts-must-now-be-confirmed
This is easiest on the web rather than from within the iNaturalist app.

Book received by the Society — Tony Payne

The following book has been received for review:



"*Ancient Sea Reptiles: plesiosaurs, ichthyosaurs, mosasaurs & more*" by Darren Naish. Natural History Museum, 2022. 192 pages, HB £20.00.

This follows on from the same author's previous book "Dinosaurs: how they lived and evolved" also published by the Natural History Museum.

An introductory chapter deals with the world of sea reptiles, including the ancient oceans, their currents and climate, as well as the discoveries of fossilised reptiles in Britain (step forward, Mary Anning), Europe and elsewhere.

The second chapter deals with sea reptile evolution and extinction events, while chapter three focuses on anatomy, especially limbs and locomotion, teeth and feeding, the skull.

The succeeding six chapters deal with particular groups of marine reptiles, as the sub-title suggests. The book is profusely illustrated with photographs of fossils and beautiful reconstructions of the reptiles in their marine environment.

Excursion Reports for GNHS/ CAFG joint forays **Alison Moss**

Two joint forays were held with the Clyde and Argyll Fungus Group. The first was on 8th October at Dawsholm Park and the second at Cashel Forest on 22nd October. Both were very successful with approximately 20 participants in each case, from beginners to experts, with a special thanks to our recorders, Dick Peebles, Neill Simpson and Gill Smart.

Dawsholm Park, like many Glasgow parks, has rich and varied habitats. Dawsholm has mixed woodland reaching down to the River Kelvin, and a pond with surrounding habitats and grassland. There were sufficient large fungi as well as tricky *Mycena* and microscopic species to keep us all amused. My personal highlight was the relative abundance of *Mycena rosea*, the rosy bonnet. This delighted me, but I was assured that this species particularly likes Glasgow Parks where it is not uncommon.

Our visit to Cashel, late in October, undoubtedly missed the peak of the woodland mycorrhizal fungi. However, there was still plenty to be found. Around 80 species were recorded. An exceptionally tall, black, (15cm), elfin saddle, *Helvella lacunosa*, stopped us in our tracks.

Elfin Saddle at Cashel by Ben Jackson

Butter caps, *Collybia butyracea*, were abundant, and a big patch of wood blewit, *Lepista nuda*, was good to find. A few wax caps were beginning to appear on the cut grass and a large, hen of the woods, *Grifola frondosa* was found at the base of a mature oak by the car park.

False Ladybird Beetle at Cashel by Ben Jackson

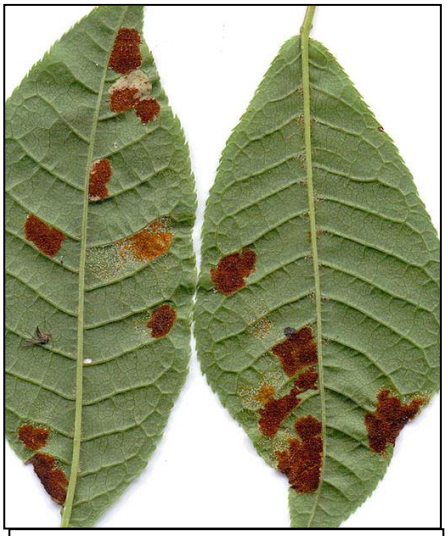
Not just fungi caught our attention. I spotted a dozing adder which caused a bit of excitement and Ben Jackson found an unusual ladybird/beetle, identified by Jeanne Robinson as false ladybird beetle, *Endomychus coccineus*.

It was a great help that Emma Sandhu, the Ranger at Cashel, had chosen a suitable circuit for our foray and pampered us with refreshments at the end of an excellent day. We have been invited to have a repeat foray earlier in the season. An offer, I know from past visits to this lovely site, will suitably reward us.

A Gall with Two Names **Paul Cobb**

The gall-mite *Eriophyes distinguendus* causes an *erineum* gall on the underside of leaves of Bird Cherry *Prunus padus*, white at first but soon becoming brown. Unlike most *erineum* galls there is no corresponding bulge on the upper side to betray its presence, at most a dark discolouration when the galls are old, so you need to turn leaves over to find it. This is why I had never noticed it before until August 2022 on the Irvine Valley Trail at Galston where it was easily visible on a leaf that had been curled upward by larval webs of the ermine moth *Yponomeuta evonymella*.

Now that I know about it, I have it from 3 Ayrshire sites and 2 in Dumfriesshire so it is widespread, but it is not easy to find. Apart from having to turn leaves over to see it, it seems to exist in very low numbers, just a few on just a few trees, with most trees seemingly unaffected, so every tree has to be checked to find one with the gall.



Eriophyes distinguendus by Paul Cobb

I checked the National Biodiversity Network Gateway map for *E. distinguendus*, and it showed no British records, though when I looked again a few weeks later a single dot had appeared near Strathpeffer. Trail reported in 1881 finding what was obviously this species at Forres and Banchory, but he did not at that time have a name to use for it, as it was not described and named until 1902.

Eriophyes distinguendus, magnified by Paul Cobb

To find if there were any other old literature records I did a Google search for its synonym *E. paderinus,* which (then) produced a GBIF (Global Biodiversity Information Facility) map for northern Europe which showed lots of records in the northern half of Scotland. I therefore returned to NBN and searched there for the synonym *E. paderinus,* and I was diverted to a different spelling, the synonym's synonym *E. paderineus*, and this map also showed lots of records in the northern half of Scotland, as well as a single record in Yorkshire. Digging deeper, NBN credits both *distinguendus* and *paderineus* as being accepted names taken from UKSI (United Kingdom Species Inventory).

I asked Margaret Redfern, co-author of the AIDGAP (Aids to Identification in Difficult Groups of Animals and Plants) "British Plant Galls", if she could shed any light on this, and as far as she is concerned *E. distinguendus* is the correct name with *E. paderineus* just a synonym and *E. paderinus* a spelling mistake. GBIF has since changed to using the name *E. distinguendus*, with *paderineus* and *paderinus* as synonyms, but it remains a mystery why NBN and UKSI should be using 2 different names (and 2 different distribution maps) for a single species.
Margaret Redfern also commented "it seems to be commoner in Scotland than further south".

More Obscure Things in Unopened Flowers **Paul Cobb**

Since my previous discoveries I have been paying more attention to flowers that remain unopened after most are in bloom in case the cause is something living inside them.

Slightly swollen flowers of Hawkweed *Hieracium* sp., just a bit wider than usual, containing black puparia, are galls caused by the Tephritid fly *Noeeta pupillata*.

Noeeta pupillata, cut open to show pupa, by Paul Cobb

So far I have only found Hawkweed flowers to check at 3 sites in 2022, but found the gall every time, in Kirkcudbrightshire at Polmaddy and Muirdrochwood (near Carsphairn), and in Ayrshire at a nameless forest between New Cumnock and Dalmellington. There are only a handful of Scottish records, but they include a previous one in Kirkcudbrightshire.

More common is the Anthomyiid fly *Botanophila seneciella*, on flowers of Ragwort *Senecio jacobaea*, but this one is not a gall-causer, it just lives inside the flower eating the inside. Affected flowers contain a surprisingly large white larva. I started finding this rather late in the 2022 season but I already have 4 Ayrshire localities and one for Kirkcudbrightshire.

An unusual site in VC86 (Stirlingshire) **Sarah Longrigg and Matt Harding**

Burncrooks Reservoir, to the north-west of Glasgow, has been the source of water supply for a large part of suburbia to the north-west of Glasgow since the late 1950s/early 1960s, but for various reasons a decision has been made to switch the supply from Burncrooks to the existing Milngavie Water Treatment Works which serve Glasgow itself. This has involved laying a new pipeline round the north of Milngavie to link up the water supply to the new areas. Work started on this in 2019, but was, I believe, delayed due to Covid, and the pipe itself was not laid until 2021.

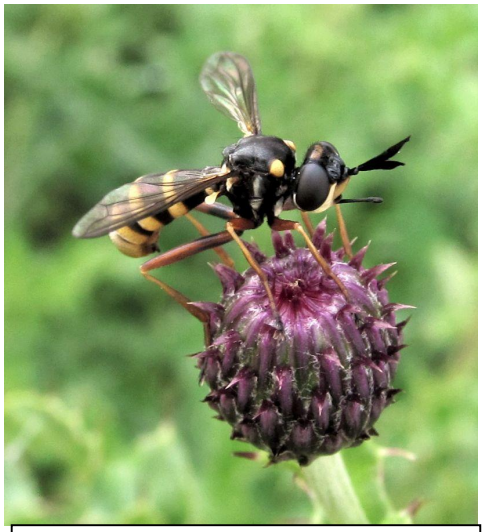
At one point, immediately east of the Allander across the "Staney Brig" on the outskirts of Milngavie, its route lay diagonally across about 1.5 to 2 acres of open ground used by the public for recreation purposes, but which had previously been used as a tip and had large amounts of broken glass near the surface, which needed to be removed and replaced with topsoil. As this area was closed to the public while the work was undertaken, it is hard to know what happened, though I believe the pipe itself was tunnelled at this point.

Scarlet-Pimpernel
(Anagallis arvensis)

On 16th July 2022 I noticed that it was possible to access the site again and, as it looked quite flowery, I went to investigate. I was amazed by the diversity of plants that I suspected either were taking advantage of the disturbed soil or had come in from elsewhere.

It seems that the local council are in charge of what happens to this section and had instructed Scottish Water to make it good, so they added what I was told was top soil, and they also sowed a wildflower seed mix from Scotia Seeds.

However, it appears that whatever material they used was more likely to have come from a brownfield site contaminated with a wide variety of seeds. I have been told that this most likely came from the Ayrshire coast, and clues are that it contains a number of coastal and agricultural margin species including some which have not been recorded before in VC86, as well as a number of unusual aliens and garden plants, many of which are represented by only 1 or 2 specimens. Very few species from the wildflower seed mix have appeared.



Thick-headed-Fly
(Conops sp.)

The dominant species have been *Persicaria maculosa* (Redshank), *Polygonum aviculare* (Knotgrass), *Chenopodium* spp. and *Tripleurospermum inodorum* (Scentless Mayweed) along with *Matricaria discoidea* (Pineappleweed), *Medicago lupulina* (Black Medick) and *Senecio vulgaris* (Groundsel). The total number of species found on this site currently stands at just over 170, including several rarities, most notably a single plant of *Anthemis arvensis* (Corn Chamomile - Nationally Endangered) and 2 plants of *Stachys arvensis* (Field Woundwort - Nationally Near Threatened). Other notable finds included all four native purple *Lamium* species and a wide variety of Toadflaxes.

Shaggy-soldier
(*Galinsoga quadriradiata*)

The flowers, especially *Tripleurospermum inodorum,* attracted large numbers of insects, notably butterflies including Purple Hairstreak and Small Copper, and a wide variety of bees including various mining bees, *Sphecodes* sp. (Blood Bee), and probable *Andrena denticulata* (Grey-banded Mining Bee) and *Colletes daviesanus* (Davies Colletes). Earlier in the summer there were large numbers of 7-spot Ladybird larvae, later followed by plentiful adults.

Golden-tailed-Hoverfly
(*Xylota sylvarum*)

Given the presence of both their food plants, it was not surprising to find the leaf beetles *Gastrophysa polygoni* and *Gastrophysa viridula*, but it was more unusual to find a mating attempt between these

species. Cinnabar moth caterpillars were found on Groundsel, and a number of interesting flies were seen including *Conops* sp. (a Thick-headed Fly which is a wasp mimic in behaviour as well as in appearance), and the beautiful Golden-tailed Hoverfly, *Xylota sylvarum,* exhibiting "leaf-licking" - a zig-zagging running behaviour as it collected food from the surfaces of leaves.

Argentinian-Vervain (*Verbena bonariensis*)

The future of this site is currently uncertain, but it would be good to know if the rarities at least could be given a chance to survive. With 11 plant species of national conservation concern, an additional 21 species on the Stirlingshire draft Rare Plant Register, and 23 species new to the vice-county, it is a demonstration of the conservation importance of brownfield habitats for plants, particularly archaeophytes, and also for insects. These habitats are often under-recorded, and the site is a great example of the botanical and entomological interest that can lurk undetected on one's doorstep.

A full species list is available to GNHS members on request to the newsletter editor.

Photos of the site are all by Sarah Longrigg; many more can be found (well worth a look!) at: https://flic.kr/s/aHBqjzZKMc

Pollok Country Park East **Article and photos by Bob Gray**

Ten of us participated in an evening's field trip on 19th March 2022 which provided us with a welcome weather window. We began by looking at some trees in front of the entrance to the re-furbished Burrell before proceeding in an anti-clockwise direction around the east end of the country park. The first tree we looked at was a mature shore pine[1] (*Pinus contorta* ssp. *contorta*). This 2-needled pine has a bark[2] of small, square plates and small cones with prickles. Its shorter needles distinguish it from the lodgepole pine.

Mature shore pine[1] (*Pinus contorta* ssp. *contorta*)

Bark[2] on trunk of *Pinus contorta* ssp. *contorta*

Although probably planted here by Sir John Stirling Maxwell (JSM), its connection with him is bit tenuous. He purchased Corrour estate on the Moor of Rannoch in

Manna ash (*Fraxinus ornus*) showing stalked leaflets[3]

1932 and proceeded to trial plant Sitka spruce on peat but, without ploughing, its growth rate was poor. Shore pine, which had been introduced to Britain in 1835 from the Pacific coast of South Alaska, was then planted on ploughed peat but even then did not grow well. Its relative, lodgepole pine, was successful however and indeed became the second most widely planted tree in Britain (after Sitka spruce) from 1945 until the 1980's.

We then examined a few recently planted Manna ash (*Fraxinus ornus*), which had been introduced in 1716 from the mountains of S. Europe and Asia Minor. Its leaflets[3] are stalked, unlike those of the common ash, and the very smooth grey bark has been tapped for mannitol, a mild laxative medicinal compound; but more about this species later.

Field maple[4] (*Acer campestre*)

Bird cherry[5] (*Prunus padus*)

Other trees recently planted in front of the Burrell include several field maple[4] (*Acer campestre*) that is arguably the only native maple out of c. 150 Asian tree species found in this country. It certainly provides the toughest of maple timber, having been used in the manufacture of harps in Saxon times. Its fruits like other maples are paired and wing borne (samaras) but unlike other maples the wings grow at 180^0 to each other.

Quite a few older, small groups of Crimean lime (*Tilia x euchlora*) also grow in this area in front of the Burrell. The distinctive glossy green foliage is disliked by aphids and so the tree is commonly planted in city streets in order to avoid the production of honeydew so common beneath other species of lime. Under the trees here much natural regeneration occurs, especially of sycamore, ash and field maple. Near here we also found an old, partially collapsed Scots laburnum (*Laburnum alpinum*). The lack of hairs on its leaves distinguishes this species from the common laburnum (*Laburnum anagyroides*). In addition it flowers about a fortnight later. Slightly farther east are many planted wild cherry trees (*Prunus avium*) as well as some bird cherries[5] (*Prunus padus*). So the opportunity was taken to look closely at the

Pink double blossom of *Prunus* 'Kanzan'[6].

vertical flower spikes of the latter, which contrast with the pendulous umbels of the former.
We just missed seeing the red flowers of the commonly planted (e.g. along Great Western Road) *Prunus* 'Kanzan'[6].

Slightly curled leaves of Broadleaved lime[7] (*Tilia platyphyllos*)

One of the highlights of the evening was to find a fair number of lime seedlings growing beneath a group of c. 6 broadleaved limes[7] (*Tilia platyphyllos*). These and the common lime (*Tilia x europaea*) flower some two weeks earlier than the small-leaved lime (*Tilia cordata*). So the later, lower temperatures means less likelihood of small-leaved lime seedlings arising this far north. David Palmar's photo clearly shows the hairs typical of the leaves of broadleaved lime sprouting from the cotyledons[8] of the seedlings here.

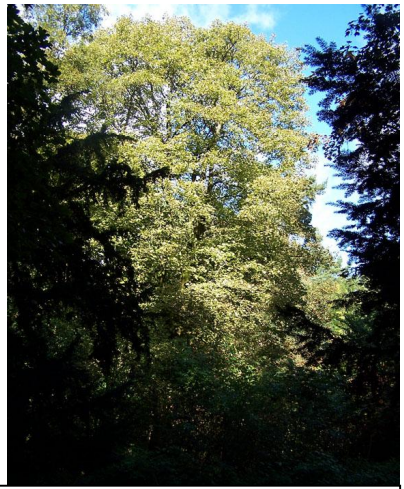
Leaves of broadleaved lime sprouting from the cotyledons[8] of the seedlings © David Palmar

Purple leaved trees become very visible in May and the east side of Pollok Park is no exception. Particularly visible amongst the mature mixed deciduous and coniferous trees were sizeable examples of both purple Norway maple and sycamore.

The former were probably *Acer platanoides* 'Schwedleri', introduced in 1870 and so fairly frequent as a purple, older tree. Its leaves become green by late summer.

Acer peudoplatanus f. *purpureum*[9]

The latter, *Acer peudoplatanus* f. *purpureum*[9], has leaves that are green above but purple below. We also came across an example of f. *erythrocarpum* which has purple leaves and red fruits.



Variegated sycamore[10] (*Acer pseudoplatanus* f. *variegatum*) 'Simon-Louis Freres'

Leaves of variegated sycamore[10] (*Acer pseudoplatanus* f. *variegatum*) 'Simon-Louis Freres'

A fine example of a clone of the variegated sycamore[10] (*Acer pseudoplatanus* f. *variegatum*) 'Simon-Louis Freres' was also found near here.

Scots pine[11] (*Pinus sylvestris*)

The area between the Burrell Field and the Hay Field contains many big Scots pine[11] (*Pinus sylvestris*) and Corsican pine[12] (*Pinus nigra* ssp. *laricio*). Both tend to grow well in well drained soil. The native Scots pine grows best in the drier east of the country where it form sizeable stands.

Corsican pine[12] (*Pinus nigra* ssp. *laricio*)

Corsican pine is native to the granite hills of Corsica from where it was introduced in 1759. Famously it has been planted on the southern shores of the Moray Firth to help stabilise the Culbin sands. It produces some 50% more timber than Scots pine though the quality of the latter is better. The biggest Corsican pine at Pollok was measured in the North Wood in 2018. It is larger than the biggest Scots pine found in the park to date. At over 3 metres in girth it is apparently second in Glasgow only to a Corsican pine in King's Park.

Sir John Stirling Maxwell was a founding member of the Forestry Commission in 1919 and its chairman from 1929 – 1932. To commemorate the centenary of the founding and the first 100 years of public forestry in Scotland, Scottish Forestry has planted[13a] at the north end of Pollok Field (east of the Burrell) many hornbeam[13b] (*Carpinus betulus*) and red maple[14] (*Acer rubrum*) as a Commonwealth Foresters' Memorial. This recognises the work of Commonwealth foresters, particularly from British Honduras (now Belize), who worked in the country's forests during World War 2. Interpretation boards[14a] now summarise much of this history. Hornbeam has a distribution similar

Forestry Commission Centenary planting[13a]

to beech and is native to England. Its name means 'hard wood' and was used for wheels and cogs in windmills and in pianos. The soft timbered red maple was introduced to this country from the eastern United States in the 17th century. It has leaves that are often three-lobed and bark that is light grey, especially in younger trees. It is famous for its red autumn leaves.

Hornbeam[13b] (*Carpinus betulus*)

Red maple[14] (*Acer rubrum*)

Forestry Interpretation board[14a]

Ash dieback disease[15]

As we continued our circular route we noticed a group of common ash (*Fraxinus excelsior*) saplings, many of which were infected with ash dieback disease[15] caused by the fungus *Hymenoscyphus fraxineus*. It is all too prevalent on the estate but, unless there is danger to the public, infected trees tend to be left, largely in the hope that resistant trees will come through.

The sight of a spectacular rhododendron[16] and azalea in full bloom reminded us that JSM was most active in the breeding of rhododendrons.

Rhododendron[16] flowers

Yew seedlings[17]

He created no fewer than seven recognised hybrids which are attributed to him and grow at Pollok. He produced two of the finest rhododendron collections in the country at both Pollok and Corrour. Most of his planting can be seen near the woodland garden just east of Pollok House.

Yew trees (*Taxus baccata*) abound in the policies here, the shade bearing ability of this climax species being quite a feature in many places where they grow in the woodland understorey beneath both conifers and deciduous trees. We found a fair number of seedlings[17] in the woodland just east of the memorial planting. A few avenues[18] occur.

Yew tree avenue[18]

One double row sits astride the path we followed, just north of the Burrell. Yew is one of Scotland's three native conifers, the other two being Scots pine and juniper. Its specific name refers to its fleshy berry which is produced by female trees only. The fleshy aril[19], which does not quite enclose the seed, is the only part of the plant that is non-poisonous. Historically the yew is famous for the production of bows with the compressible sapwood on the inside of the curve and the elastic heartwood on the outside. Today anticancer drugs have been developed from the needles of the European yew and the bark of the Pacific yew (*Taxus brevifolia*).

Fleshy arils[19] of a yew tree

Following the track back towards our starting point we came across a sizeable group of naturally regenerated saplings of silver birch (*Betula pendula*). This pioneer native species possesses light, windborne seeds and is a light demander. By contrast near here were two planted memorial saplings of Tibetan cherry (*Prunus serrula*) grown especially for its striking copper coloured bark. It was introduced from China in 1908, so its name is a bit of a misnomer.

The highlight of the evening in some respects was the sight of a group of about six Manna ash in full bloom[20] near the park exit to Haggs Road. We saw these as we were leaving. This tree is insect pollinated, unlike the wind pollinated common ash. The petals are very narrow and about 1cm long. Most unusually the tree is androdioecious, i.e. some specimens are male only whilst others possess flowers that are hermaphrodite (having both male and female parts). The specimens we looked at had male flowers only, with conspicuous anthers. Apparently this species of tree is unique in that it falls into this unusual category. Indeed only some 15 flowers and about 115 animals do so. So this represented a remarkable end to the evening.

A tree list of Pollok Park East is available from Bob Gray. It contains updates of the list handed out at the meeting.

Manna ash[20] in full bloom

Trinidad and Tobago Expedition 2022 Report **Holly Fraser**

In May of 2022, ten students from the University of Glasgow travelled to Tobago to conduct zoological research. Additionally, this expedition fosters long-standing ties between UofG, the local community in Tobago and the University of the West Indies. The expedition lasted from the 30th of May to the 3rd of August. Three separate projects were carried out during the expedition, focussing on the Trinidad Motmot (a bird species endemic to Trinidad and Tobago), several turtle species and finally, the *Pristimantis* frog genus. The specifics of each project, as well as some of the preliminary results are detailed below:

Motmot Projects

The Trinidad Motmot is an omnivorous bird with a diet comprised mainly of invertebrates, as well as occasional small vertebrates and fruit (Ffrench, 2012). The two Motmot projects focussed on a novel anvil-using behaviour found in the species, first documented by Rutherford and Bianco (2014). The first project consisted of exploratory work to find anvils and recording the physical and habitat characteristics of the rocks deemed to be anvils. During this work, 43 anvils were found. The preliminary results of this first project show that anvils are generally found in areas of high or moderate human disturbance, vary widely in size and are found in a mix of native and invasive vegetation.

The second project had a diet analysis component, of which the aims were to analyse the prey item types processed, time it takes to process different prey types and other anvil-centric behaviours displayed. While mapping the 43 anvils, the hard-shelled prey remains were collected and then identified upon return to Glasgow with the help of Dr Mike Rutherford. 18 of the anvil locations were also

selected for camera trapping. The prey remains analysis showed that the most common they prey items were, respectively, orders Mollusca and Coleoptera, with small amounts of Cicadas, Diplopoda, Decapoda and one instance of bird remains. From 49 instances of anvil use recorded on camera, Mollusca were also the most processed prey, followed by Diplopoda and Coleoptera, with several instances of rodents, reptiles and fruits. The processing times were lowest for arthropods (mean = 21s), followed by Mollusca (mean = 56s), fruit (mean = 68s) and vertebrates (mean = 159s). The most smashed prey item species was a large, conical land snail, *Plekocheilus glaber*. Moreover, we observed vertebrates (a rodent and two squamates) being processed on anvils for a long period of time to soften the body which was then consumed whole. Lastly, we also observed use of anvils to smash open fruit.

Turtle Projects

There were 2 projects on the Tobago expedition pertaining to turtles. On average, the expedition spent 6 nights a week, for 8 weeks on 2 separate beaches. The primary research species was the Hawksbill turtle; however activity from Leatherback turtles and Green turtles was also noted. The first project was a general monitoring and tagging project, following the numbers of turtles coming onto the beach over the 8 weeks. The expedition members took size measurements, GPS locations of the nests, and either recorded the tag numbers of returning turtles or tagged new individuals nesting on the beaches. The second project looked into the internal body temperatures of the nesting turtles and variations throughout the nesting season. The temperature was measured using an IR thermometer on the eggs as soon as they were laid in the nest. The results of these studies show that there were 121

118 instances of hawksbill turtle activity were recorded, 2 instances were from leatherbacks, and 1 was a green turtle. There were 60 confirmed lays (where we physically saw a mother laying a clutch), 20 estimated lays (where there was evidence (such as turtle tracks or sand scattering) suggesting that a mother had successfully laid a clutch of eggs), and 41 false crawls (where a turtle came on to the beach but did not end up laying). We tagged 29 turtles for the first time and replaced 5 tags. For the second project, there did not appear to be any significant change in internal body temperature from June to early August.

Frog Project

Three species of the frog genus Pristimantis are present in Tobago: *P. charlottevillensis, P. turpinorum,* and *P. urichi*. *P. charlottevillensis* is much larger than the others, but its juveniles cannot be reliably distinguished from adults of *P. turpinorum*. This project aimed to find potential field signs to distinguish these species by taking photographs and morphometric data alongside a genetic sample (toe clipping) of individuals in the overlapping size range.

We found and photographed 62 frogs, taking morphometric measurements from 56. Some very young juveniles were too delicate to collect or to measure with callipers, so photographs and dorsal skin swabs were taken in the field.

Different frog species have varying tolerance to handling stress, a factor unknown for most. Early in the project, we discovered that *Pristimantis* frogs are especially sensitive, as two suffered seizures following toe clips, one of which died. In consultation with supervisors, we revised our procedure to reduce handling time, including introducing a day of rest in terrariums between measurement and toe clips. As part of the novel procedure, individuals showing any significant signs of stress were skin-swabbed rather than toe-clipped. Toe clips remained the preferred procedure for frogs judged tolerant, because there is a high chance that the swabs will not yield sufficient DNA. At time of writing, DNA has been extracted from toe clips but not yet from swabs and will be barcoded once the swab extractions are done. In total, 34 frogs were toe-clipped and 9 were swabbed.

The Trinidad and Tobago Expedition 2022 would like to thank the GNHS Blodwen Lloyd Binns Bequest once again for their generous support, and hope that the research carried out on the expedition is interesting and worthy of the support. The final reports of the data collected will be completed and delivered in March 2023, with some projects aiming to be published in research papers.

Next Newsletter - copy to David Palmar by 22nd March 2023 please.

Thank you very much to all the contributors. 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 as separate jpg files (not as part of a Word document), and make them under 100Kb each for emailing).

General Correspondence to the General Secretary:
Alison Park