

Founded
1822



NEWSLETTER

Yorkshire Philosophical Society

Promoting the public understanding of science since 1822

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From the Chair

Dear Members,

In July we were pleased to send members their 2021 membership cards; these allow members free concessionary visits to the Yorkshire Museum. The Yorkshire Museum opened on 9 July with a Richard III exhibition, which will continue to October 31st. Visitors are requested to pre-book at present. Note that the Museum is open from 11am to 4pm on Wednesdays to Sundays i.e. closed on Mondays and Tuesdays.

It was good to meet again in July for a lecture in the Tempest Anderson Hall when we enjoyed Ross Bartlett's presentation on "The Missing Lynx: The past and future of Britain's lost mammals". This was an event planned to celebrate the bicentenary of the 1821 findings in Kirkdale Cave. Further events on this theme "Kirkdale 200" are being planned with support from the YPS Geology Group.

In the meantime we are planning a blended autumn programme that will be partly "in person" on Wednesday afternoons or evenings and partly on Zoom on Tuesday evenings. The Café Scientifique sessions will continue on occasional Wednesday evenings on



Unseasonal, but the markings on this fine "cup and ring" stone by the path leading to Manor Cottage show up remarkably well with a light covering of snow. Photo: thanks to Sarah Sheils

Zoom. The themes for autumn 2021 are "Climate Change" and "Art and Science". The programme of speakers is updated regularly on <http://www.ypsyork.org> and we are experimenting with recording some of the talks. In the present situation we do sometimes have to alter venues or times of events, so please do let us know if you have an email address, as this is the easiest and quickest way for us to let you know about any last minute changes.

We urgently need more volunteers to help with the administration of the Society and I am happy to have an informal no obligation conversation with you if you might be able to help; this is particularly important as 2022 is a special year for the Society.

With this newsletter are booking forms for the YPS Annual Dinner to be held at the York Hilton on Wednesday 8th December. I hope to meet many of you on this occasion or at other events this autumn.

On behalf of the YPS Trustees and myself I send you our good wishes.

Catherine Brophy, Chair
chair@ypsyork.org York 499179

With this Newsletter

- ◆ Visit to RHS Bridgewater, 16 September
- ◆ Annual Dinner, 8 December

If anything is missing, contact Frances Chambers as below.

LARGE PRINT COPIES OF THIS NEWSLETTER ARE AVAILABLE ON REQUEST FROM info@ypsyork.org or 01904 656713.

Opinions expressed in the articles that follow are those of the individual writers and do not necessarily reflect the views of the YPS.

York Museums Trust News

York Museums Trust has applied to the government's MEND fund for a grant to help make repairs to the façade and roof of the Yorkshire Museum, including a possible water-harvesting project. The YPS Trustees have been pleased to offer support for the Trust's bid to this fund.

The York Archaeological Trust is currently undertaking an archaeology dig on the flood defences in Museum Gardens. When this work has been completed, the plan is for the Environment Agency to improve the flood defences in the Gardens so that, for example, the Hospitium is no longer regularly surrounded by floodwater from the Ouse. The work is expected to take twelve weeks.

The Trust continues to welcome individual donations to help it through these difficult times. If you would like to support YMT and the Yorkshire Museum in this way, donations can be made using Paypal or credit or debit card via the YMT website:

[Donations - York Museums Trust](#)

Introducing Jon Coulson

We are delighted to welcome Jon Coulson, our new Trustee, confirmed at our AGM in June. Jon has lived in York since 1954 and, after studies in Computational Science at Leeds University, spent his working life at what is now AVIVA. He served as a York magistrate from 1992 to 2020, and is a member of several local and national heritage societies, including the British Human Power Club, which is mainly concerned with recumbent cycles. This hair-raising photograph shows a city centre race around St Helier in Jersey in 2009. Now that his racing days are over, Jon is enjoying spending time making things in his man cave, his current project being a folding chair.



Sheldon Trust

The Society has nominated Dr Dorothy Nott to replace Mr Ken Hutson as the YPS nominee to the Sheldon Trust. We are most grateful to Ken for his work linking the two organisations over many years to the advantage of both.

News from the Activities Group

On Thursday 1st July, before the final release from lockdown, 38 intrepid YPS tourists boarded a York Pullman coach for a four-day tour visiting Burghley House, Sutton Hoo and Woodbridge, Cambridge and Ely. This was the much-postponed Cambridge Tour, originally planned for May 2020. Of course, when it was rescheduled, we had all hoped that lockdown would have finished before we left, but our resourceful and helpful group was not deterred. The remaining restrictions, along with 'teething troubles', as organisations opened again with inexperienced staff and confused management, failed to dampen their spirits, as they enjoyed each other's company, and the opportunity to visit interesting places away from home.

Now the restrictions have finally been removed (at least for a time...), we have been able to organise three more real (not virtual) activities. The first will take place before you receive this newsletter. On 29th July, our chair, Catherine Brophy, has arranged an afternoon Garden Party, in the wonderful setting of York Medical Rooms, which have a beautiful 'Secret Garden' hidden behind Stonegate. The building was once the home of a famous President of the YPS – Tempest Anderson, ophthalmic surgeon and volcanologist, who also donated money to build the hall in which we hold our lectures.

Catherine is also planning a one-day coach tour on 16th September, to visit the new RHS garden in Bridgewater. The garden has been created in the former Worsley New Hall estate, Salford, with the Bridgewater Canal forming the southern boundary. This will be a joint trip with YANT (York Association of the National Trust) and has already attracted a great deal of interest, so two coaches may be needed.

Our Annual Dinner will be held on 8th December in the York Hilton. This is our one formal event, and will allow members to meet and enjoy good food and good company, in a pleasant setting.

As the uncertainties about Covid resolve, and organisations adjust their policies, we hope to be able to offer more opportunities to meet, visit new places, and revisit familiar places which have been closed to us.

Margaret Leonard

Notes from the Geology Group

Further notes on geology in the time of Covid.

1.a) Virtual Trips:

In preparation for the Yorkshire Geological Society (YGS) trip to Widdop Moor (see no.4), their **virtual geology tour of Widdop Moor** using Google Earth is still available.

<https://www.yorksgeolsoc.org.uk/virtualfieldtrips/virtualgeologytours>

1.b) Virtual Events and Talks:

Three recent talks from YGS are still available on their YouTube channel.

Simon Mitchell - The Cretaceous history of Jamaica

Chris Jackson - Hot Rocks Beneath Our Feet

Nick Shaw - A new (exciting) opportunity for future geothermal energy in Yorkshire

https://www.youtube.com/channel/UCzBPkcmYZbbLnaez7_tuohg/videos

2) Women and Men in Geology:

Elsa Panciroli. Leverhulme Early Career Research Fellow.

Recent work on early mammals and trackways in Isle of Skye.

<https://oumnh.ox.ac.uk/people/dr-elsa-panciroli/#/>

Account of interests, research and publications with several YouTube films.

<https://elsapanciroli.wordpress.com/about-me/>

She has written the 'Lost Worlds Revisited' pages for The Guardian from July 15 to August 18.

<https://www.theguardian.com/profile/elsapanciroli>

[panciroli](https://www.theguardian.com/profile/elsapanciroli)

She has most recently written on enigmatic trackways of the Yorkshire Coast and has written a book, *Beasts Before Us*, see no.6

3) Online Study and Resources:

Future Learn has a free four-week course, Climate Change: The Science. Start now.

<https://www.futurelearn.com/courses/climate-change-the-science>

Liam Herringshaw is running a three-part online course for **Hidden Horizons**,

An Introduction to Fossils. 4th, 11th, 18th October.

<https://hiddenhorizons.co.uk/collections/online-events/products/an-introduction-to-fossils-online-course-autumn-2021>

4) Real Events and Trips outside:

Hidden Horizons are running **the Great York Fossil Hunt on 1st August**, starting at Queen's Staith.

<https://hiddenhorizons.co.uk/collections/york-hidden-history-walks/products/the-great-york-fossil-hunt>. Booking required.

By the time you read this it may have passed, but Hidden Horizons have four more walks on several days in August. There is a charge for each walk,

which should be booked.

<https://hiddenhorizons.co.uk/collections/york-hidden-history-walks>

The Rotunda Geology Group has a field trip to Spiker's Hill on 7th August. Not yet on the website. <http://www.rotundageologygroup.org/>

YGS has a field meeting on geology and poetry, Widdop Moor, Saturday 11th September. Pre-registration is required.

<https://www.yorksgeolsoc.org.uk/events-list/field-excursion-geology-poetry>

5) Our Museum of the Month:

Following the May recommendation of Ross Barnett's book, *The Missing Link*, and his talk to YPS in July, try a trip to **Cresswell Crags and the Museum**, for those missing the earlier YPS trip.

<https://www.cresswell-crags.org.uk/>

Reminder:

The Yorkshire Museum reopened on 9th July

6) Books and Mags:

Elsa Panciroli: *Beasts Before Us: The Untold Story of Mammal Origins and Evolution.*

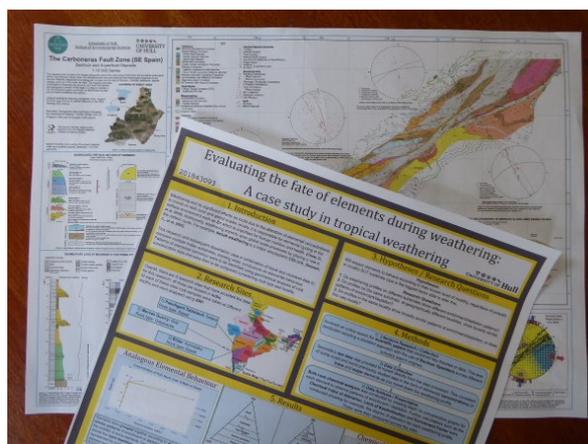
<https://elsapanciroli.wordpress.com/writing/>

<https://www.bloomsbury.com/uk/beasts-before-us-9781472983824>

Paul Thornley

John & Anne Phillips Prizes 2020 & 2021

At Dr Ross Barnett's lecture, "The Missing Lynx: the Past and Future of Britain's Lost Mammals" on 21st July we were very pleased to be able to announce the winners of our geology prize for this year and last. Neither Jack Connor (2020 winner) nor Amber Finch (2021) could be with us in person but posters showing their work were available to view and we hope to arrange an online interview with them in the not too distant future.



Letter from Australia



G'day Friends,

Central Queensland, where I'm currently working, encompasses a large area of land that is used for living, growing of food and extraction of minerals needed for energy production and for industrial and personal use. One form of minerals for personal use are gemstones and, to the west of the regional centre of Emerald, are gemfields from which sapphires and zircons (and, very rarely, diamonds) are won. Along with the New England district of New South Wales, these gemfields are a world-renowned source for commercial grade blue sapphires and have been so since the mid-1850s.

In 1873, the Deputy Government Surveyor, A. J. Richardson, misidentified red zircons as rubies in alluvial deposits at a location along Retreat Creek approximately 45km west of Emerald whilst investigating routes for the railway. Further investigation revealed the presence of sapphires and thus the village that was established to support the first miners came to be called Sapphire. Additional villages named Anakie Siding, Rubyvale and Willows were established, each supporting its own gemfield, and, collectively, the villages and gemfields are known as The Gemfields. Initial production entered the German market and was sold into other European countries. Towards the latter decades of the 1800s, miners originally from Russia were a significant population and, as a result, the Russian crown jewels and many pieces of jewellery belonging to Russian nobility contain Australian gems. The Russian revolution in 1917, however, caused a downturn in the industry and few miners remained in the gemfields in the time between the wars.

Due to an increase of interest from tourists and gem buyers, mostly from Thailand, the Queensland Government, in 1968, set aside portions of land for the use of small miners, prospectors and gem collectors. In the early 1970s, larger scale mining operations using heavy machinery, fuelled a mini mining boom that was curtailed by a fall in sapphire prices later in the decade. In 2004, Queensland government legislation was streamlined to encourage the return of larger scale mining and by 2020, Australian blue sapphires account for over 70% of global production.

Sapphires, along with rubies, are a gem variety of the rock forming mineral corundum. This mineral is a crystalline form of aluminium oxide (Al_2O_3), with the crystal system to which corundum is a family member being hexagonal and the habit being either steep

bipyramidal, tabular, prismatic, rhombohedral, massive or granular. In the pure crystalline form, corundum is naturally transparent, so it is the introduction of transition metal impurities into the lattice that produces the colour of the gemstones. Chromium replacement of aluminium gives rubies their red/purple colouration, whilst iron, titanium, vanadium and nickel replacement give sapphires every other colour except red. Figure 1 shows a spread of most of the colour variations of sapphires recovered in Australia.

It is the iron and titanium within the lattice that produces the deep blue for which sapphires are renowned. Indeed, the word is derived from the Latin "saphirus" and the Greek "sapheiros" both meaning blue. On the Mohs' scale of hardness, corundum rates 9 with only silicon carbide (moissanite) and natural diamond rating harder at 9.25 and 10 respectively.

Zircons are the crystalline form of the mineral zirconium silicate (ZrSiO_4) that can be found in most igneous and metamorphic rocks. When gem quality, most natural zircons are yellow, red or brown and are usually translucent but can be transparent. The crystal system for zircons is tetragonal and the habit can be tabular, prismatic, massive or granular. Replacement of zirconium within the lattice can be by uranium, thorium, lead, hafnium, yttrium and other rare earth elements, phosphorus, iron and aluminium. As some of these elements are radioactive, zircons are valuable for determining a minimum age of the non-sedimentary rocks in which they can be found and a maximum age for the emplacement of sedimentary rocks in which they can also be found. On the Mohs' scale of hardness, zircon rates 6.5 to 7.5 with the variation due to the elemental replacement. The less hard zircons are associated with iron replacement and are usually the darker red- and brown- coloured



Figure 1: Sapphires from Australia that are all brilliant cut and 3mm in size.

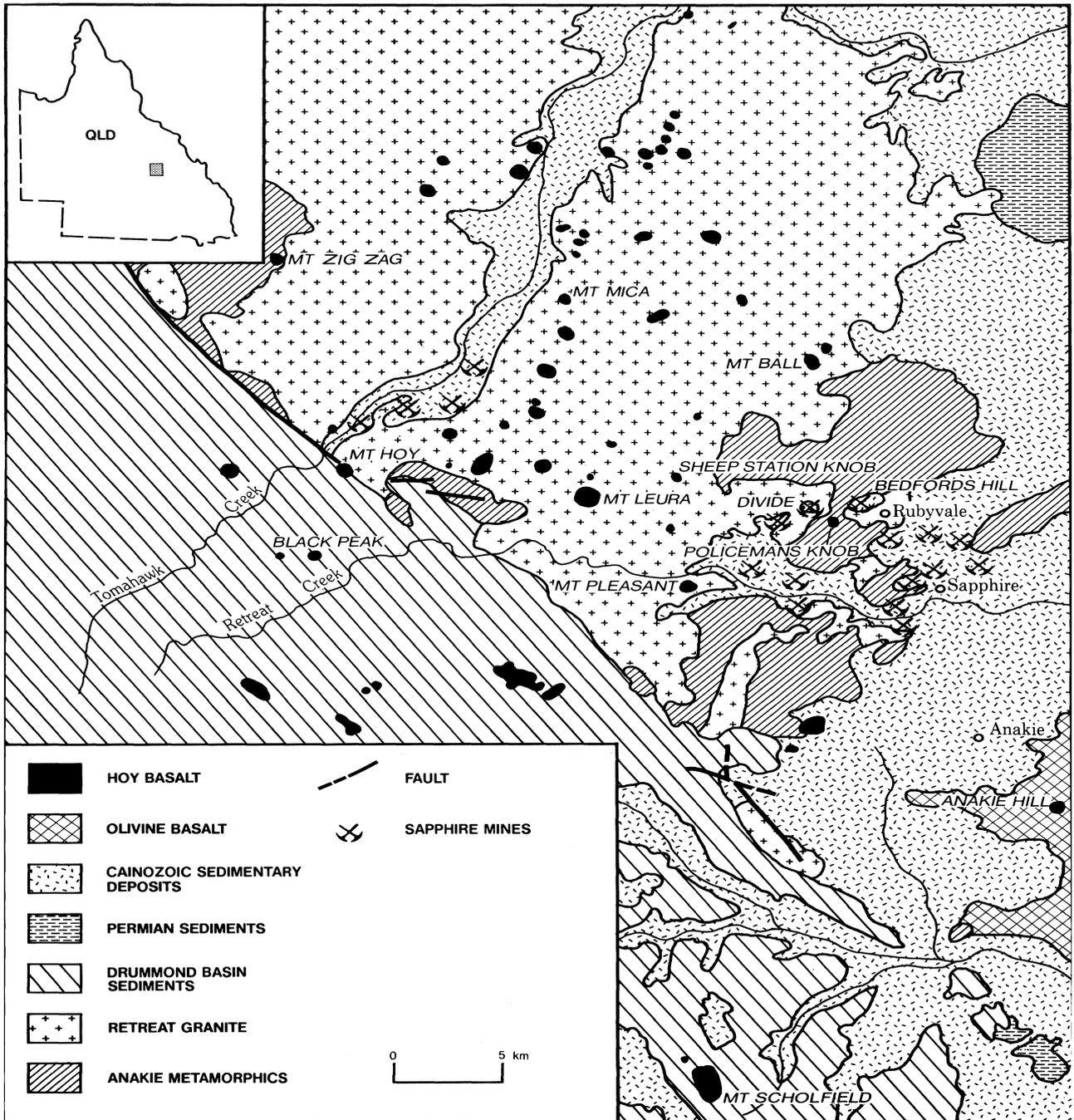


Figure 2: Simplified geologic of The Gemfields, Central Queensland (after Robertson and Sutherland, 1992)

stones, whilst the green, yellow and paler stones are generally harder and usually associated with an increased radioactive element replacement such as uranium and thorium. The word zircon comes from the Arabic 'Zargun' which itself is derived from the Persian word 'Azargun' meaning gold-coloured or gold-hued.

The Gemfields encompasses an area of approximately 1000km² as a northeast-southwest trending volcanic province associated with the extinct volcano Mt Hoy (Figure 2).

This approximately 50km wide province consists of over 70 plugs (or volcanic necks), though

extensive lava flows are only associated with Anakie Hill in the southeast. The southern and western boundaries of the Gemfields overlie sedimentary rocks of the Visean Age (346.7Ma to 330.9Ma) Ducabrook Formation from the Late Devonian (382.7Ma to 358.9Ma) to Early Carboniferous Periods (358.9Ma to 330.9Ma) Drummond Basin. The remainder of the area (central and northern and eastern boundaries), however, is underlain by the southern portion of the Anakie Inlier, a tectonic fold belt of Neoproterozoic (1000Ma to 541Ma) to Cambrian (541Ma to 485.4Ma) strata that separates the Drummond Basin in the west from the Bowen Basin to the east and are mostly I-type granitoids

from the Retreat Batholith that intrude the micaceous quartz-schists of the Anakie Metamorphic Group. Overlying all of this are alluvium and weathered volcanic material of Eocene Epoch age (55.8Ma to 33.9Ma) of the Palaeogene Period (65.5Ma to 23.03Ma) to Miocene Epoch age (15.97Ma to 13.65Ma) from the Neogene Period (23.03Ma to 2.58Ma).

As mentioned above, the Mt Hoy Volcanic Province encompasses over 70 volcanic plugs within a 100km by 50km area. The summit elevation at 550m is preserved as the Mt Leura Conservation Park with eruptions occurring from 57Ma to 14Ma. Only in the southeast are basaltic lava flows extensive and exposed at the surface. It was originally surmised that the sapphires and zircons found here were liberated from weathering and erosion of these basalts. Age dating, mineralogy and geochemistry shows that not to be the case. Dating of zircons from The Gemfields shows three distinct populations: 65.9 ± 5.5 Ma, between 58Ma and 55.5Ma and 26Ma to 14.5Ma. Clear white zircons are associated with the oldest date ranges, whilst the lighter coloured, pale yellow zircons appear to be associated with the 58Ma to 55.5Ma date range. Darker coloured, red-brown zircons are associated with the youngest date range. These three populations, however, are generally, not area specific within the Mt Hoy Province. With the sapphires occurring as waterworn fragments in old river gravels that form low ridges rising above the present-day alluvium, there is a degree of uncertainty in the dating as reworking of the gemstone bearing gravels blurs boundaries. The actual wash is generally from 0.5 to 1.5m thick and varies from surficial deposits to 12m deep. It is worked either in shallow open cuts or in shafts.

The dates listed above, coincide with the eruptions of Mt Hoy, however the mineralogy of the lava flows associated with the volcanic plugs shows only negligible occurrences of gemstones in the basalts. Geochemistry shows that the pyroclastic material falling as ash and forming tuffs and breccias from the initial onset of eruption are a more likely source for the gemstones. On this basis, the sapphires found in the Gemfields are believed to have been derived from around the crust-mantle boundary (between 25km and 33km depth though possibly as deep as 55km) from source rocks more felsic than mafic. The main bulk of the sapphire was transported during the pyroclastic phase of eruptions between 58Ma and 55.5Ma and it is not known if sapphire accompanied the younger eruptions (26Ma to 14.5Ma) that delivered the high-uranium zircon as no primary deposits have been found containing both the red-brown to red zircons and sapphires. Sapphires have not been recovered

from wash containing the clear white zircons, however diamonds, on occasion, have. It has been suggested that during this eruptive phase, the thermal gradient was relatively shallow and allowed material to be sampled from the mantle between 120km and 150km depth. Some researchers regard these depths to be the “diamond window”, open for the approximately 5.5 million year period of the clear white zircon emplacement before the thermal gradient steepened, closed the window and hotter shallower basaltic eruptions commenced. No primary deposits for these diamonds have been identified.

Stay safe and well.

Andrew Wheeler
YPS member
Queensland, Australia

References:

A.D.C. Robertson & F.L. Sutherland, 1992: Possible Origins and Ages for Sapphire and Diamond from the Central Queensland Gem Fields, in **R.O. Chalmers, Commemorative Papers (Mineralogy, Meteoritics, Geology)**, edited by Lin Sutherland, *Records of the Australian Museum (1992) Supplement 15. ISBN 0 7305 9990 6*

Two hundred years ago today ...

Two hundred years ago the Yorkshire Philosophical Society didn't exist. But things were afoot

In July of 1821, John Gibson - a manufacturing chemist from Essex - was visiting friends in his native Yorkshire, probably including Dr Harrison of Kirkbymoorside (where Gibson was born). Walking along the road - probably what is now the A170, near where it crosses Hodge Beck - Gibson passed some road repairs: a group of workmen filling up potholes and ruts from a pile of bones and limestone fragments at the roadside.

Gibson was a keen fossil-collector, and immediately recognised that among the bones were those of hyenas and bears: not animals generally found in Yorkshire. Questioning the roadmenders, he established that these came from a nearby quarry, close to the church of St Gregory, Kirkdale.

The quarrymen informed him that they had broken into a cave filled with such bones, and had been shipping them out by the cartload for road-mending and suchlike, presumably as being useless as building stone.

Gibson, no doubt, filled his pockets with specimens and sped back to Dr Harrison, whose anatomical knowledge would confirm the identification of the bones. Then he told a few people of his discovery. One thing led to another ... (to be continued)

Peter Hogarth

Contemporary Scientist No 6

Dr Leon Willis, Postdoctoral Research Fellow, University of Leeds

“When you hear ‘medicines’ your first thought may be of small-molecule drugs that you take as a tablet, such as paracetamol. As well as these traditional therapies, many modern medicines are made of proteins, biological molecules whose complex 3D structures allow them to work correctly. If this structure changes, or ‘denatures’, the protein chains can unfold and stick together in a process called aggregation. This is what happens when you cook an egg - the proteins aggregate together to form the solid white.

Most protein-based medicines have to be kept as liquids before being injected into patients. As they are made, protein drugs are forced through narrow pipes and needles, which could cause them to denature and aggregate. Aggregates in these medicines may be harmful to patients. Therefore, my research aims to understand how the manufacturing process could damage these medicines, with the goal of helping drug companies stop this from happening. In the picture, I am using a machine which helps work out the size of protein-drug aggregates formed as a result of fluid forces.”



Summer in the Museum Gardens

Summer is now upon us and the gardens are a riot of colour. This is testament to the sterling work done by the gardens staff to make the gardens the most beautiful place in the city centre. Horse chestnuts are in full bloom and are a favourite of bees. Many of the flower borders are awash with spikey purple Salvias. Some of the more interesting plants can be found in the edible wood behind the Art Gallery including Bergamot which gives Earl Grey tea its characteristic flavour. The distinctive aroma of wild garlic is prominent as you enter the edible wood from the Museum Gardens. The various flowering plants have many visiting bees and good numbers of tree bees are being spotted regularly. These small attractive bees often make their nests in nest boxes that are not in use.

Summer visiting birds are now much in evidence in and above the gardens. Swallows and house martins are regular visitors but swifts are no longer as abundant as they used to be due to a lack of suitable nesting sites nearby. The song of blackcap warblers has been heard recently. A favourite spot appears to be the Ginkgo near the observatory. Blue tits and great tits have all nested and some have young and may be thinking of second broods. The Minster peregrines have also been seen over the gardens. Panicking pigeons are often a sign that they are in the vicinity! In past years spotted flycatchers have nested in the gardens but these birds have seen a steep decline in numbers recently.

More species of hoverflies are becoming evident in the gardens including the small, but splendidly marked *Scaeva pyrastris*. Another hoverfly to spot is the wonderfully named marmalade hoverfly, *Episyrphus balteatus*. This common species can be found particularly near the limestone pavement and is plentiful in gardens everywhere. Butterflies are now abundant and large numbers of Speckled Woods have been seen especially, and not surprisingly, in the butterfly border in front of St Mary's Lodge. Holly Blue butterflies have also been spotted here. Damselflies have been seen near the river including the splendid Banded Demoiselle.

Many of the summer leaf mines are now evident but are missed by most people. Leaf mines are the feeding traces of larvae that live between the top and bottom surfaces of leaves. They often have a distinctive appearance allowing the species to be identified and are often, (but not always), found on specific food plants. The parent insects may be flies, sawflies, beetles or moths. Recently a fly mine of *Agromyza demeijerei* was found on Laburnum. This is a new species for the gardens and had been searched for over several years. One leaf mine that cannot be missed is on Horse Chestnut and is the result of feeding by the larvae of the small micro moth *Cameraria ohridella*. These large blotch mines, appearing in huge numbers, are often asked about. Leaf mines largely appear in two forms, linear mines or blotches but may be a combination of the two, starting as a linear mine but then becoming a blotch.



Wild Garlic
Photo: Stuart Ogilvy

Mammals have also been active in the gardens. Woodmice are common especially near the Observatory and in the wall opposite Manor Cottage. When mice are particularly abundant, weasels often appear in the gardens and can be spotted hunting during the day. Hedgehogs have also been seen regularly. These can make an extraordinary amount of noise as they move about through the undergrowth. At times foxes are spotted in the gardens during the summer and places where they rest can sometimes be identified by a strange musty smell.

Stuart Ogilvy

Gardens Group

The YPS Gardens Group is about to resume its activities!

I would like to convene a meeting of the Group as soon as possible, so if you are interested in the Museum Gardens, and in being part of the Group, please let me know, and I'll make sure you're invited. No commitment!

The primary role of the Gardens Group is simply to discuss matters of interest to YPS members. In the past, the Gardens Group initiated a number of Gardens-related projects, including the Geological Map and the Gardens History book. Currently a couple of projects are waiting to be discussed, and I hope members of the Group will contribute further ideas.

So please get in touch. My email is peterhogarth.46@gmail.com

It seems likely that the meeting will have to be by Zoom (or possibly in the open air!) but if this presents problems for you I am sure we can find a way to work around them.



Photo: courtesy of Chris Shepherd

Peter Hogarth

And more opportunities to get involved ...

York accents

Over 200 people booked for the lecture organized by the YPS on 9th June as part of this year's York Festival of Ideas. We are very grateful to Dr Sam Hellmuth for her talk on "You've changed your tune: intonational variation and change in Middlesbrough (and York)". Sam has also edited the Zoom MP4 file and if you would like a second chance to listen and watch this talk she is hosting it at:

<https://tinyurl.com/yorktalkinfo2021>

A request!

Sam and her team at the Linguistics and Language Department at the University of York are now starting to research the York accent and would like to hear from any York gentlemen, old or young, who might be able to help. The research will be undertaken online.

YPS Member seeking help to validate research

I am seeking help from academics or retired academics to review some important research findings. These are rooted in evolutionary psychology but they have wide-ranging and very significant practical implications – most urgently, for the financial system. As an ex-financial regulator, I took the findings to the regulator and was referred to the Bank of England. The Bank has said the work sounds interesting and timely. They suggested I get an academic review and revert to them. I myself am not an academic; I am a business person with a psychology degree. I am now seeking help from academics (or retired academics) to conduct the review, with the aim of providing an opinion to the Bank.

Rob Jenkins, a reader in psychology at York, has so far read drafts of chapters 1-7. He agrees we should seek to engage a broader group to read the work as soon as possible, aiming to arrive at an opinion for the Bank. Rob has said:

"This is a highly interdisciplinary piece of work that combines professional insight and scholarly research. It makes the case that ancient instincts drive more of human behaviour than is commonly recognised, and that they are driving us to catastrophe. I have enjoyed reading the draft and I hope that it reaches its intended audience. The core message is important."

I will welcome any offers of help. The breadth of the work makes it of general interest. The project is confidential at present but later on I hope to present the research at a Café Scientifique session.

Please call me directly to find out more or email me to book for a confidential zoom overview at 7pm on Tuesday 17 August. Any offers of help will be welcome at any time.

Lydia Ebdon

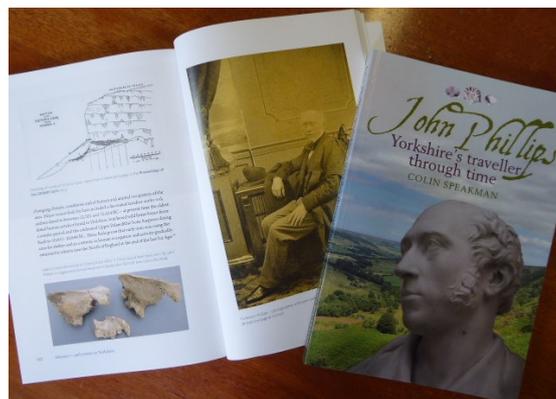
Lydia_ebdon@yahoo.co.uk 07880 602226

Special Offer

Thanks to a kind offer from author and YPS member Colin Speakman, we are delighted to announce that signed copies of his book *John Phillips: Yorkshire's traveller through time* are available from the Lodge at the special price of £10 (usual price £15).

The YPS receives £4 for each copy sold, so if you would like to help the Society while enjoying some late summer reading, please contact Frances on info@ypsyork.org or 01904 656713 to arrange mail order (P&P extra) or a time to collect from the office.

For a review of the book, please see our May 2020 Newsletter:



Book Review

River Kings: A New History of the Vikings from Scandinavia to the Silk Roads

By Dr Cat Jarman, Collins, 2021
ISBN: 978-0-00-835307-0

Examining the finds from a well known 1980s archaeological dig at Repton in Derbyshire, BioArchaeologist Cat Jarman came across a small orange bead. The bead was one of the finds in a mass grave of this Viking Winter Camp. This carnelian bead takes Cat on a journey from Derbyshire to India exploring the journeys both eastwards and westwards of the Vikings.

Using the latest forensic techniques of isotope analysis, radiocarbon dating and DNA analysis Cat Jarman demonstrates that the Vikings interacted closely with people in Eastern Europe and reached Constantinople and possibly Baghdad. As well as invading and fighting there is also evidence of extensive trading relations. The design of the smaller Viking ships would have meant they could use rivers such as the Volga or Dnieper but then possibly turned them into flat packs using slaves to portage their ships and goods to the next navigable river, as they made their way to the Caspian or Black Sea. Early descriptions of the people known as the Rus are similar to descriptions of Viking people and bio archaeology techniques on some skeletons can demonstrate family connections stretching back to Scandinavia.

Archaeological explorations in Ukraine, for example, have shown from their graves that Viking traders traded in silver coins from the Islamic World, tiny scraps of silk as well as iron from their ships, metal jewelry and carnelian beads. These contents link the Viking traders with the Silk Roads showing a spider's web of trade routes of the early medieval world.

Cat Jarman ends her book with a visit she made to Gujarat, in India, to visit a contemporary Carnelian Jewelry workshop. This is a very wide ranging account told in a lively way; although I would have liked a detailed map to open out as I absorbed her extensive research.

Catherine Brophy

Exploration from your armchair

Richard III

In connection with its Richard III exhibition, the Yorkshire Museum is hosting a series of online talks, all starting at 4.30 pm and free of charge. To book a place:

<https://www.yorkshireremuseum.org.uk/exhibition/richard-iii-coming-home/>

Online Expert Lectures

19 August: Dr Carolyn Donohue: *York's 'Most Famous Prince': Richard III, the City and its Citizens*

16 September: Dr Kate Giles: *The Middleham Jewel: discovery, analysis and interpretation*

30 September: Dr Charlotte Bolland: *Fact and Fiction in the Tudor portraits of Richard III*



Photo:
York Museums Trust

Online Curator Talks

12 August: *Richard III's York*

9 September: *Uncovering the Ryther Hoard*

7 October: *Henry Percy and The Percy Panels*

Climate change

If you enjoyed (or missed) Professor John Marshall's lecture "UV-B radiation was the terrestrial killer at the Devonian-Carboniferous boundary" on 11th May and would like to know more:

<https://theconversation.com/prehistoric-climate-change-damaged-the-ozone-layer-and-led-to-a-mass-extinction-139519>

Biodiversity

The Royal Society has published a series of essays on biodiversity explaining the latest scientific research:

<https://royalsociety.org/topics-policy/projects/biodiversity/>

Archaeology

A carousel of images from CBA Yorkshire:
<http://www.cba-yorkshire.org.uk/digital2020/>

Why not cut out for your notice board? ✂ -----

Diary

Please note that the following is correct at time of going to print but details, including venues, may change and we continue to add new events. For the most up-to-date information, please check the website:
www.ypsYork.org

News from the Lodge

Mon 23 to Fri 27 Aug *Frances is on leave this week*

Tue 31 Aug *The office re-opens*

As the first step in a gradual process, the Lodge will be open on Tuesdays from 31st August, from 11am to 4pm, when Frances will be available on the telephone and to see members in person. As she does go out for errands or even has occasional days off, please telephone first to make sure she will be there before making a special journey.

As Frances is clinically vulnerable to Covid-19, if you are able to wear a mask when visiting the Lodge, this would be much appreciated.



Thur 16 Sept, YPS Excursion
Visit to RHS Bridgewater Garden
See flyer enclosed

Wed 29 Sept, 2.30 pm – YPS Lecture
Venue: Tempest Anderson Hall
Restoring Yorkshire Peatlands[†]
Mathew Snelling, Yorkshire Peat Partnership

Wed 6 Oct, 2.30 pm – YPS Lecture
Venue: Tempest Anderson Hall
John Phillips: Yorkshire's traveller through time
Colin Speakman

Wed 13 Oct, 7.30 pm – YPS Lecture

Venue: To be confirmed

Title to be confirmed[†]

Professor Piers Foster, Director, Priestley Institute for Climate Change, University of Leeds

Wed 20 Oct, 2.30 pm – YPS Lecture

Venue: Tempest Anderson Hall

Title to be confirmed

Dr Louisa Hood, Bar Walls Manager

Wed 3 Nov, 7.30 pm – Café Sci

To be confirmed

Tues 9 Nov, 7.30 pm – YPS Lecture

On Zoom – *an invitation will be sent out by email*

The Science of Medieval Stained Glass*

Professor Ian C Freestone, UCL Institute of Archaeology

Tues 23 Nov, 7.30 pm – YPS Lecture

On Zoom – *an invitation will be sent out by email*

University of York Archaeology Dept joint lecture and presentation of the Wellbeloved and Ramm prizes

Tues 30 Nov, 7.30 pm – YPS Lecture

On Zoom – *an invitation will be sent out by email*

How did COVID-19 change the air pollutants we emit?[†]

Professor Alistair Lewis, National Centre for Atmospheric Science

Wed 1 Dec, 7.30 pm – Café Sci

On Zoom – *an invitation will be sent out by email*

Digital Games and Attention

Dr Joe Cutting, Dept of Theatre, Media, Film, TV & Digital Media, University of York

Tues 7 Dec, 7.30 pm – YPS Lecture

On Zoom – *an invitation will be sent out by email*

Pox and Pestilence - Art and the unforgiving*

Dr James Grant

Wed 8 Dec, 7.00 pm – YPS Social Event

Annual Dinner

See flyer enclosed

[†] Climate change theme * Art and Science theme

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SAFEGUARDING

The Yorkshire Philosophical Society (YPS) takes seriously its obligations and responsibilities to protect and safeguard the welfare of any child, young person or vulnerable adult who attends our events.

Unless otherwise stated, all our events are open to members and non-members. We welcome children provided that they are accompanied by a responsible adult.

The Safeguarding Policy is displayed at the Lodge. The Safeguarding Officer is the Chair, Ms Catherine Brophy (chair@ypsYork.org) to whom all safeguarding concerns should be addressed.

PRIVACY

The Yorkshire Philosophical Society (YPS) holds members' names and addresses and, where supplied, telephone numbers and email addresses. This personal information is used for sending out details of our activities. The information remains confidential and is retained within the Society. Members may have access to their personal information on request by contacting the Clerk at info@ypsYork.org