

Founded  
1822



# NEWSLETTER

## Yorkshire Philosophical Society

Promoting the public understanding of science since 1822

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### *From the Chair*

Dear Members,

We do hope you are safe and well and have possibly been able to meet up with friends and family during the summer. We are pleased to send you this newsletter with thanks to the members who contributed.

In September a small group of members met for lunch before joining Dr Peter Hogarth in Museum Gardens for his guided Tree Walk. Thanks to Peter for his excellent talk and agreeing to repeat the walk for a second group as we had many interested participants. See the report on page 10.

In October we held our first online Zoom lecture with 49 households logging on to listen to Professor Mike North's presentation on "*Sustainable Development and the CO<sub>2</sub> refinery*". Hosted as a webinar, the presentation could be seen clearly by participants who were able to type their questions at the end. This stimulating lecture gave us an insight into one important aspect of the work of the Green Chemistry department at the University of York. Dr Rod Leonard's note about



*A YPS member on Mars? See page 6  
Photo: Andrew Wheeler*

the lecture is available on the website and will be included in the 2020 Annual report. The second October lecture by Ian Milsted, outlined the plans for "The Roman Quarter": a large archaeological dig followed by the development of a new Roman Centre. This event attracted 89 households to log in and also worked well. Hosting this event on my Zoom account I had a moment of panic when my computer wanted to

close the Zoom programme at 7.27pm. As I retrieved the situation I thought that I had never worried on lecture evenings that the lecture hall would disappear but in cyberspace there is a slight concern that

With this newsletter you should find:

- Bletchley Park: invitation to a virtual visit
- Subscription renewal invitation (not included for members paying by Standing Order)

If anything is missing please contact Frances as below.

LARGE PRINT COPIES OF THIS NEWSLETTER ARE AVAILABLE BY CONTACTING [info@ypsyork.org](mailto: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.

occasionally a computer wants to close at the wrong moment.

Given the current Covid-19 restrictions we are continuing to host both Lectures and Café Scientifique on Zoom. If you feel this isn't for you, see page 16 for some encouragement. As venues open up over the next few months we do plan to resume "in person" events but these will need to be held within government guidelines, with possible limits to numbers and other safeguards. The Activities Group is planning study tours and day trips for next spring onwards. We hope to include a visit to Richard Bramley's farm; his presentation from the Café Scientifique talk on October 7<sup>th</sup> is available on our website.

We will find a way to keep all members updated on these ever changing developments but the easiest way is to send information by email so please do join our list if you have an email address.

One date for your 2021 diaries is Tuesday 22<sup>nd</sup> June from 2pm to 4pm for the postponed AGM, followed by a lecture. This has been booked in the Tempest Anderson Lecture Theatre in the Yorkshire Museum.

As you will know there have been staffing changes, including redundancies at York Museums Trust. The Trust has received some government funding and is undertaking further fundraising as explained below. It is good to know that the Museum Gardens are allowed to remain open despite the November changes to the Government regulations.

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

*Catherine Brophy, Chair  
chair@ypsyork.org*

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## York Museums Trust News

As you may know, the Society nominates one of the trustees of York Museums Trust, one of several ways in which we are able to support the Trust. Stephen Lusty, our vice-president and former chair, has just reached the end of his five years as our YMT trustee, and we would like to thank him very much for his unstinting effort and enthusiasm during this time.

We are delighted to announce that our new YMT trustee will be Andrew Scott, CBE, a Life Member of the Society. A former Director of the National Railway Museum and the London Transport Museum, and currently Hon President of York Civic Trust, and also involved with the North York Moors Historical Railway

Trust and North York Moors National Park Authority, Andrew has many years of experience in the museums sector as well as commitment to the culture and heritage of York and Yorkshire. We are most grateful to him for agreeing to be our nominee to the Board of York Museums Trust, where his expertise will be particularly valued at this challenging time.

YPS members who have supported the YMT in the past by subscribing to the YMT card may be aware that this is shortly to be replaced by a new supporter scheme, details of which will soon be announced. In the meantime the Trust continues to welcome individual donations to help it through these very difficult times. If you would like to support YMT and the Yorkshire Museum in this way, donations can be made using Paypal or a credit or debit card via the YMT website:

[Donations - York Museums Trust](#)

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## Alan Cochrane

We were very sorry to receive sad news of the death of Alan Cochrane, who served on YPS Council from 2007 to 2009. He and his wife Celia were active and enthusiastic members of the Society, involved in the then Social Group, the cataloguing of the library in the Yorkshire Museum, the sorting and cataloguing of the books in the Lodge reading room and, not least, the recruitment of several new members. Alan was keenly interested in the history of the Society, contributing articles to the newsletter and Annual Report and always happy to share his research with other writers. We send our condolences to Celia and family.

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## News from the Activities Group

The Activities Group has now held two meetings on Zoom. This has been an interesting experience for those of us unfamiliar with the new technology, but it has allowed us to have some discussions about what we can provide for members in this confusing situation.

As you know, we have had to postpone our two study tours planned for 2020 to similar dates in 2021, and cancel our Annual Dinner. However, in September, Catherine Brophy organised a successful 'Get Together' lunch, followed by two small group tours with Dr Peter Hogarth, looking at the trees in Museum Gardens. Although tours with six or fewer people in the open air, are still allowed, as we get into winter they are not very practical. We do have ideas for the spring, which will be detailed in the next newsletter, and we have been looking for winter alternatives.

We have been able to book a very interesting opportunity for 20<sup>th</sup> January – a virtual tour of Bletchley Park. This is an interactive activity, and should be fascinating. A booking form, with more information, is enclosed. Many people enjoyed the Allerton Grange virtual tour, and this, though sadly not free, should be even more exciting. We have tried to find other, similar activities, but although there are many on-line tours (see the last newsletter for an archaeology tour and Paul Thornley’s Geology Group notes on the website and in this newsletter for some excellent examples), we have not yet been able to find other interactive tours. Do let us know if you have come across any.

We are, however, working on creating our own virtual interactive activities. Manuela Sowter is planning a virtual tour of York Cemetery, and we have an on-line Christmas Quiz coming up at 7.30 pm on Wednesday, 16<sup>th</sup> December (see below). It will be a light-hearted and festive affair – we do hope you will let us see your decorations – so do join in and have some fun!

*Margaret Leonard*

## The YPS Zoom Quiz for Christmas

Wednesday 16<sup>th</sup> December, 7.30 to 8.30 pm

All members are cordially invited to join us from the comfort of their own homes for a light-hearted pre-Christmas get together via Zoom. Some familiar faces will provide entertainment with favourite readings and seasonal quiz questions. No prizes; just laughter, applause and conviviality.

We hope you will help us to end this unusual year on a festive note by providing yourself with a mince pie and a mug or glass of something cheering. This is a chance to get out your Christmas jumper or Santa hat, show off your tree or decorations, or simply give us a smile and a wave.

An invitation like those for Zoom lectures will be emailed to all on our lecture list a couple of days before the event. If you don’t currently receive lecture invitations and would like to be added to the list, just email Frances at [info@ypsyork.org](mailto:info@ypsyork.org)

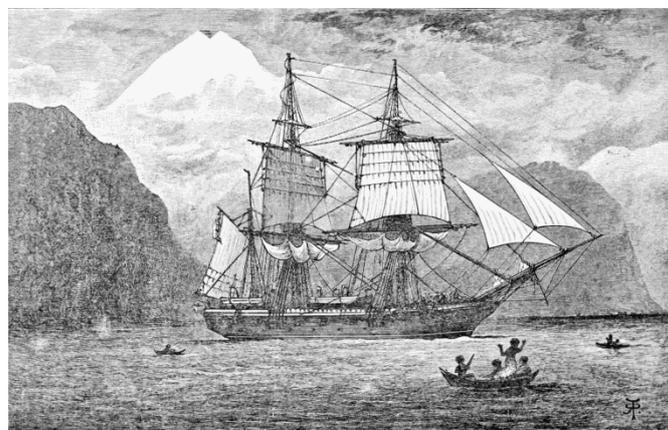
For this event it will be helpful if your computer or device has a working camera and microphone but, if not, you are most welcome to watch and listen without being seen or heard yourself.

Do join us on December 16<sup>th</sup> and share some festive cheer!

## Favourite Quiz Questions

Our Zoom quiz will be a light-hearted affair, but for those who enjoy a more serious test of knowledge, here are a few of our “favourite” quiz questions on the themes of science and York. Answers and explanations are on page 15.

1. What is the longest animal ever to have existed?
2. Who was the naturalist on HMS Beagle?
3. Who devised the equals sign and in which century?
4. How did Sir John Cockcroft avert a nuclear disaster at Windscale?
5. What was the first invertebrate to be covered by the Scientific Procedures Act (which restricts experimentation on animals for ethical reasons)?
6. Name towns twinned with York.
7. What pagan decoration is always to be included in the Christmas decorations on the altar of York Minster?
8. Which distinguished poet, born in York, almost certainly would have been Poet Laureate, had he not taken American citizenship in 1946?
9. YPS question. At the first meeting of the British Association for the Advancement of Science, in 1831, who famously said, “I am for Moses & the Dean!”
10. Who was awarded an honorary degree at York University in 2002? (Oh, yes he was!!)



*HMS Beagle*

## Notes from the Geology Group

Further notes on geology in the time of Covid, with two months “for the price of one” (November events should still be available on YouTube). Where there is a huge amount of choice on a website, I have chosen only one or two activities.

### November 2020

#### 1. a) Virtual Trips:

The **Yorkshire Geological Society YouTube channel** has a set of drone footage of nine sites in Yorkshire of geological interest. Look at the Playlist option. It starts at Brimham Rocks.

<https://www.youtube.com/channel/UCzBPkcmYZbbLn aez7 tuohg>

<https://www.youtube.com/channel/UCzBPkcmYZbbLn aez7 tuohg/playlists>

#### b) Virtual Events and Talks:

The Geological Society has its past public lectures available to view at any time. I suggest

Public Lecture Jan 2020: **How and why the Earth is different**, Nick Rogers

[https://www.youtube.com/watch?v=tgP8QL1Algw&feature=emb\\_title&ab\\_channel=GeologicalSociety](https://www.youtube.com/watch?v=tgP8QL1Algw&feature=emb_title&ab_channel=GeologicalSociety)

#### 2. Women and Men in Geology: (See Paul Hildreth’s four talks on the chalk of Flamborough)

**George Lamplugh (1859-1926)** was an East Riding boy who became one of the most eminent British geologists and palaeontologists of his age. Born in Driffield and grew up in Bridlington. He examined the glacial deposits and cretaceous strata before taking a professional role with the Geological Survey in 1892.

YPS have biographic notes and references on the website. Hull Geological Society have notes on a talk about Lamplugh’s study of the Quaternary of East Yorkshire by John Catt.

<https://www.ypsYork.org/resources/yorkshire-scientists-and-innovators/george-lamplugh/>

<http://www.hullgeolsoc.co.uk/workof.htm>

#### 3. Online Study:

Liam Herringshaw reports the new website of **Hidden Horizons** and the Fossil Shop in Scarborough. They are offering a course on **An Introduction to Fossils**, over three Tuesday nights in January/February. £50 including a set of quality replica fossils.

<https://hiddenhorizons.co.uk/collections/online-events/products/an-introduction-to-fossils-online-course-autumn-2020>

Liam and HH also offer fossil-hunting trips.

#### 4. Trips outside (self-guided):

In these days when so much is closed, it is still possible to examine a wide range of building stones by looking

at the outside of churches. A trip towards Boroughbridge is rewarding.

Church towers often contain the oldest stones (in terms of quarrying, if not deposition) and several such towers locally contain Roman, Anglo-Saxon, Medieval and Modern stones.

- **Holy Trinity Little Ouseburn** (WR, now North Yorkshire) south of Boroughbridge, with its Anne Brontë connections and extraordinary C18th rotunda mausoleum to the Thompson family. The tower contains a band of bright red local Triassic sandstones.

[https://www.crsbi.ac.uk/quick-](https://www.crsbi.ac.uk/quick-search?q=little%20ouseburn&WINID=1603731069027)

[search?q=little%20ouseburn&WINID=1603731069027](https://www.yorkpress.co.uk/news/10920957.visiting-a-north-yorkshire-church-attended-by-anne-bronte/)

<https://www.yorkpress.co.uk/news/10920957.visiting-a-north-yorkshire-church-attended-by-anne-bronte/>

[http://www.english-church-](http://www.english-church-architecture.net/n%20york%20/little%20ouseburn/little-ouseburn.htm)

[architecture.net/n%20york%20/little%20ouseburn/little-ouseburn.htm](http://www.english-church-architecture.net/n%20york%20/little%20ouseburn/little-ouseburn.htm)

- **All Saints’ Kirby Hill** (or Kirby on the Moor) (NR) just north of Boroughbridge.

The base of the tower has a large gritstone block with a rather eroded Latin inscription. The porch has a number of early carved blocks embedded in the walls.

The door contains ancient ironwork, possibly C12. If you are lucky enough to find the church open, the tower contains four magnificent Anglo-Saxon carvings. The strong suggestion is of an ancient church rebuilt from an even older stone one.

[https://www.crsbi.ac.uk/view-](https://www.crsbi.ac.uk/view-item?key=WXsiUCI6eyJUZXJtcyI6ImFsbCBzYWludHMga2lyYnkgGlsbCj9lCjGJjoiZXIKMElqcGJObDE5In0&WINID=1603731517868#y_liP-4sqksAAAF06bKhcg/11437)

[item?key=WXsiUCI6eyJUZXJtcyI6ImFsbCBzYWludHMga2lyYnkgGlsbCj9lCjGJjoiZXIKMElqcGJObDE5In0&WINID=1603731517868#y\\_liP-](https://www.crsbi.ac.uk/view-item?key=WXsiUCI6eyJUZXJtcyI6ImFsbCBzYWludHMga2lyYnkgGlsbCj9lCjGJjoiZXIKMElqcGJObDE5In0&WINID=1603731517868#y_liP-4sqksAAAF06bKhcg/11437)

[4sqksAAAF06bKhcg/11437](https://www.crsbi.ac.uk/view-item?key=WXsiUCI6eyJUZXJtcyI6ImFsbCBzYWludHMga2lyYnkgGlsbCj9lCjGJjoiZXIKMElqcGJObDE5In0&WINID=1603731517868#y_liP-4sqksAAAF06bKhcg/11437)

[http://www.ascorpus.ac.uk/catvol6.php?pageNum\\_urls=141](http://www.ascorpus.ac.uk/catvol6.php?pageNum_urls=141)

<http://www.allsaintskirbyhill.org.uk/heritage/heritage.htm>

#### 5. Our Museum of the Month:

**Whitby Museum** in Pannett Park is open at time of writing. It has an important collection of marine fossils, land fossils from Kirkdale Cave as well as jet and other pieces.

<https://whitbymuseum.org.uk/whats-here/collections/>

#### 6. Books and Mags:

**John Phillips, The Rivers, Mountains and Sea-Coast of Yorkshire**, published 1853. Recommended by Colin Speakman as a never-bettered description of the county. Available as a free Google ebook or as a reproduction of the text from Amazon or elsewhere.

[https://play.google.com/books/reader?id=f96BAAAAMAAJ&hl=en\\_GB&pg=GBS.PP8](https://play.google.com/books/reader?id=f96BAAAAMAAJ&hl=en_GB&pg=GBS.PP8)

<https://www.amazon.co.uk/rivers-mountains-sea-coast-Yorkshire-inhabitants-ebook/dp/B07CXZHCVQ>

## December 2020

### 1. a) Virtual Trips: **The Geological History of Yorkshire** from Yorkshire Branch of OUGS.

<https://ougs.org/files/yor/reports/The-Geology-of-Yorkshire.pdf>

### b) Virtual Events and Talks:

#### **Geologists' Association had a free Festival of Geology** set of four talks on 7<sup>th</sup> November 2020.

These talks are available to view until the end of December.

Volcanoes and drones, Tideway tunnel and geology under London, Extinctions at Devonian/Carboniferous and Cretaceous/Paleogene.

<https://geologistsassociation.org.uk/festival/#vfoftalks>

The Yorkshire Geological Society has four Christmas Lectures, 1<sup>st</sup>, 3<sup>rd</sup>, 8<sup>th</sup>, 10<sup>th</sup> December.

<https://www.yorksgeolsoc.org.uk/events>

<https://www.yorksgeolsoc.org.uk/ygs-xmas-lectures>

### 2. Women and Men in Geology:

Dr Emma Liu of UCL Earth Sciences gave the talk on Volcanoes and drones at the GA festival mentioned in 1b) above. See her profile, links and blog. Her mastery of geo-chemistry, physics, technology and geology is outstanding.

<https://www.ucl.ac.uk/earth-sciences/people/academic/dr-emma-liu>

<https://blogs.egu.eu/divisions/gmpv/2020/03/04/five-hundred-miles-from-civilisation-exploring-active-volcanism-in-the-south-sandwich-islands/>

<https://www.cam.ac.uk/stories/activevolcano>

### 3. Online Study:

The Open University has a six-part course on YouTube, Geological Time.

[https://www.youtube.com/watch?v=pk4l-vmJiYc&t=7s&ab\\_channel=OpenLearnfromTheOpenUniversity](https://www.youtube.com/watch?v=pk4l-vmJiYc&t=7s&ab_channel=OpenLearnfromTheOpenUniversity)

### 4. Trips outside (self-guided) **Part Two:**

In these days when so much is closed, it is still possible to examine a wide range of building stones by looking at the outside of churches.

Church towers often contain the oldest stones (in terms of quarrying, if not deposition) and several such towers locally contain Roman, Anglo-Saxon, Medieval and Modern stones.

**St Mary Bishophill Junior (York).** The lower part of the tower has herringbone work, probably just pre-conquest, with reclaimed stone and rubble from Roman, Anglo-Saxon and Viking buildings. The full YAT fascicule is included for extra study. The Corpus of Anglo-Saxon sculpture has eleven entries for the church.

<http://www.historyofyork.org.uk/themes/anglo-scandinavian-york/church-of-st-marys-bishophill-junior>  
[https://static1.squarespace.com/static/5c62d8bb809d8e27588adcc0/t/5cc8609e419202c81dbf79da/1556635826784/low+res+AY8-2\\_StMaryBishophill.pdf](https://static1.squarespace.com/static/5c62d8bb809d8e27588adcc0/t/5cc8609e419202c81dbf79da/1556635826784/low+res+AY8-2_StMaryBishophill.pdf)

[http://www.ascorpus.ac.uk/catvol3.php?pageNum\\_urls=239&totalRows\\_urls=288](http://www.ascorpus.ac.uk/catvol3.php?pageNum_urls=239&totalRows_urls=288)

**St Helen's Church Skipwith.** The C11th tower clearly has good Roman gritstones, probably taken from a nearby villa site. Archaeology has shown an even earlier church underneath. Several features appear to be Roman details in tower arch and ground floor windows. The interior of the tower contains the Ragnarok graffito. Corpus of Romanesque Sculpture identifies many features

[https://www.crsbi.ac.uk/view-item?key=WXsiUCI6eyJUZXJtcyI6InNraXB3aXRoIn0slkYiOiJleUowSWpwYk5sMTkifQ&WINID=1604773497800#y\\_liP-4sqksAAAF06bKhcg/3531](https://www.crsbi.ac.uk/view-item?key=WXsiUCI6eyJUZXJtcyI6InNraXB3aXRoIn0slkYiOiJleUowSWpwYk5sMTkifQ&WINID=1604773497800#y_liP-4sqksAAAF06bKhcg/3531)

Other photos at

<http://www.greatenglishchurches.co.uk/html/skipwith.html>

Brief archaeology at first link. Comprehensive one at second:

[https://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-3817-1/dissemination/pdf/Church\\_Archaeology\\_Volume\\_11\\_pdfs/churarch011\\_035-038\\_hall.pdf](https://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-3817-1/dissemination/pdf/Church_Archaeology_Volume_11_pdfs/churarch011_035-038_hall.pdf)

<https://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-1642-1/dissemination/pdf/SNY11486.pdf>

<https://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-1642-1/dissemination/pdf/SNY11486.pdf>

<https://archaeologydataservice.ac.uk/archiveDS/archiveDownload?t=arch-1642-1/dissemination/pdf/SNY11486.pdf>

### 5. Our Museum of the Month:

#### **Sedgwick Museum of Earth Sciences**

You can get lost for hours inside the Museum, whether visiting in person or online.

<http://www.sedgwickmuseum.org/index.php?page=the-galleries>

### 6. Books and Mags:

**Kieran D. O'Hara's *A Brief History of Geology*** is sitting on my table for when I have some moments free.

<https://www.cambridge.org/gb/academic/subjects/earth-and-environmental-science/earth-science-general-interest/brief-history-geology?format=HB#>

[https://www.abebooks.co.uk/servlet/BookDetailsPL?bi=30683287890&cm\\_sp=Searchmod--NullResults--BDP](https://www.abebooks.co.uk/servlet/BookDetailsPL?bi=30683287890&cm_sp=Searchmod--NullResults--BDP)

[https://www.amazon.co.uk/Brief-History-Geology-Kieran-OHara/dp/1107176182/ref=sr\\_1\\_1?dchild=1&keywords=kieran+o%27hara&qid=1604775330&sr=8-1](https://www.amazon.co.uk/Brief-History-Geology-Kieran-OHara/dp/1107176182/ref=sr_1_1?dchild=1&keywords=kieran+o%27hara&qid=1604775330&sr=8-1)

[https://www.amazon.co.uk/Brief-History-Geology-Kieran-OHara/dp/1107176182/ref=sr\\_1\\_1?dchild=1&keywords=kieran+o%27hara&qid=1604775330&sr=8-1](https://www.amazon.co.uk/Brief-History-Geology-Kieran-OHara/dp/1107176182/ref=sr_1_1?dchild=1&keywords=kieran+o%27hara&qid=1604775330&sr=8-1)

[https://www.amazon.co.uk/Brief-History-Geology-Kieran-OHara/dp/1107176182/ref=sr\\_1\\_1?dchild=1&keywords=kieran+o%27hara&qid=1604775330&sr=8-1](https://www.amazon.co.uk/Brief-History-Geology-Kieran-OHara/dp/1107176182/ref=sr_1_1?dchild=1&keywords=kieran+o%27hara&qid=1604775330&sr=8-1)

*Paul Thornley*

## Letter from Australia



G'day Friends,

As you know, the space age commenced in October 1957 with the launch of the first artificial satellite, Sputnik 1, by the USSR. This was followed in April 1961 with the launch of the first human into earth orbit, Yuri Gagarin, also by the USSR. The exploits of the Kettering Grammar School Satellite Tracking Group from 1960 onwards, demonstrated that enthusiasts with determination, imagination and a near zero budget, could be a part of this great adventure. I remember, as a child, being crowded into the school arts room to watch Armstrong and Aldrin bounce down the ladder onto the moon's surface on a flickering 18" black and white television screen. From 500 children and teachers, there was absolute silence. For the next few years of the Apollo missions, from the drama of Apollo 13, to the rover excursions of Apollo 17 and the long duration stays of the Skylab missions, it was an exciting time and as if the future was boundless. Then something changed. It seemed politicians suddenly stopped listening to the scientists and engineers and to the visionaries and futurists and, just like that, around the world, the dreams and aspirations of children vanished.

However, children grow up and some of us never forget. I kept the faith by determining to become a qualified geologist and venture into exploration, enthused by the examples of Marco Polo, Vasco Da Gama, Ferdinand Magellan, James Cook, Ernest Shackleton, Matthew Flinders, Douglas Mawson and Len Beadell. I had the great privilege, in the late 1980s to be in the exploration office during a visit by Eugene and Carolyn Shoemaker on one of their regular journeys to Australia in the hunt for impact craters. One of our suggestions (and one that had previously been suspected as having been an impact crater), the Teague Ring Structure in Western Australia, was indeed,

conclusively identified by them as having been formed by impact and has since been officially renamed Shoemaker Crater in their honour.

It seemed, though, the world and space exploration were marking time. The promises of the United States Space Shuttle failed to bear out. The Soviet Space Shuttle was never utilized. Inspirations from ESA were simply not taken up and promising beginnings from junior startups were abandoned when they were taken over by the big players. Yet, quietly, in the background, those of us who remembered the promise of Apollo, kept the dream alive.

Begin the 21<sup>st</sup> century and some of those working quietly became very loud. Burt Rutan and Paul Allen of Microsoft demonstrated re-usability with their Spaceship One which Sir Richard Branson has turned into Spaceship Two for suborbital flights. Then Elon Musk and Space X did the same with the Falcon 9 booster and Jeff Besos with Blue Origins' New Shepard booster. Suddenly, space companies noticed and saw the resources outside of Earth's influence might now become accessible and operations and even bases in space become possible. In the 2010s, companies were formed to do just that, and the government space agencies began to take notice.

For years now, I've been a member of advocacy groups that see benefits in living and working in space. For profit is a strong motivator but not the only one and a re-invigorated worldwide space program becomes a powerful inspiration for science and engineering to this next generation of school children. Having made myself known to fellow researchers, in 2015, I was invited to partake in an evaluation of a helmet designed for surface operations on Mars. Of concern was that the curvature of the Perspex would cause aberrations in both the visual acuity and colour recognition of the wearer. A secondary objective was to show the benefits of having scientists trained as astronauts rather than



*Mars Society Desert Research Station, Utah, USA Photo: Andrew Wheeler*

astronauts trained as scientists on actual missions rather than directing from mission control. It was successful. Light refraction was either not noticeable or was compensated by the human brain subconsciously and I saw colours exactly as I would without a helmet. There was one curiosity though. Each time I stooped to examine a specimen, the helmet would fog and then clear on straightening. I very quickly modified my behaviour to select the next specimen, pick it up and then examine it whilst standing. This did not seem to happen to the other participants. The secondary objective, to my great relief, was also a success. Compared to technically trained professionals, nontechnically trained professionals and nontechnically trained nonprofessionals, I spent the shortest time examining fewer specimens to record the greatest number of positive results with the least number of incorrect determinations. After the exercise had been completed, we were informed that this was a repeat of a similar test in a different location with different participants and that a similar result had been achieved. There was another curiosity involving both groups. With the first group, participants were observed undertaking the tasks first wearing the simulated spacesuit and then not wearing the spacesuit. For our group, we were observed firstly not wearing the spacesuit and then wearing the spacesuit. For reasons still not understood, both groups showed that observational performances improved whilst wearing the spacesuit regardless as to whether this was first or second.

My willingness to continue trialling surface suits and exploration techniques became known to more space advocates and I was invited to be the geologist and crew scientist on a simulated Mars mission at the Mars Society's Desert Research Station in the high desert of Utah, USA. That two weeks rotation became a four weeks double rotation and I went from crew scientist and geologist on Crew 214 to science officer and mission commander of Crew 215. In late October 2019, we travelled to Utah and, four weeks later, in late November, we returned. At the website: <https://mdrs.marssociety.org/previous-field-seasons/>, our biographies are listed under Crew 214 and Crew 215 and our daily reports can be read, at the bottom of the page, on pages 95 to 80 (the archive is in reverse order so that the earlier mission is farther back). Great fun was had by all.

As the geologist, there were two experiments to be conducted. Firstly, I was tasked with collecting samples of the surface material so that magnetic particles could be identified as micrometeorites or not. I selected two locations where one was representative of the undisturbed surface and the other was across a non-perennial dry stream channel. Using a set out grid of equal size, the objective was to obtain enough

specimens to form an opinion on the annual infall of micrometeorites (or the record of 'flux rate') and how mobilization of the surface (by water) might affect that record. Results are pending. Secondly, I was to demonstrate that hydrated minerals could be used as a water source on Mars by deploying a small heating device (not quite an oven) on the surface and observe and collect water being boiled out of the rocks. The nearby gypsum deposits would serve as analogues for Martian evaporite deposits. Unfortunately, the device failed the stress testing just before departure and we were forced to improvise with equipment found in the science module of the habitat. This proved successful and the resultant water and powder was trialled as to their suitability for medical applications. A paper entitled "The Drinkable Rock: Extracting H<sub>2</sub>O from minerals for resource depleted emergencies on future Mars missions" is in preparation.

At the end of our expedition, we had left a favourable impression and so we decided to apply for another two week long rotation to the MDRS to be conducted in October/November this year. We were accepted and I was invited to be the commander. During this expedition, I want us to investigate further the medical applications of mineral distilled water and to undertake a limited seismic survey across the evaporite deposit to determine the vertical extent of the gypsum bearing strata. In addition, I've been invited to be the geologist on an expedition to a Mars analogue site at Ladakh, India (Ladakh is situated at the base of the Himalaya and has been recently separated from Kashmir and Jammu State to form a union territory in its own right) during July/August, where we intend undertaking a resistivity survey across the permafrost to examine the nature of the underlying aquifers in particular their salinities. Sadly, all these plans are on hold until such time as the world regains its sanity.

Stay safe and well.

*Andrew Wheeler  
YPS member  
Queensland, Australia*



*Sample collection Photo: Andrew Wheeler*

## York's Hidden Heritage

York is a city rich in heritage. What images does that sentence conjure up? Probably old buildings, museums, Jorvik, Lord Mayors and the like. If pressed, then the rivers and strays might get a mention. How many would realize that one of the richest 'heritage' sites in York is a unique nature reserve two miles from the Minster and within the ring road?

Askham Bog is exceptional for habitats and biodiversity: its tall fen habitats are threatened at a European scale and it supports between 5% and 10% of all non-microbial species in the UK within its 46 ha, including plenty of rarities. The reserve is a 'cathedral of nature conservation', to quote Sir David

Attenborough who visited Askham Bog in 2016 to help the Yorkshire Wildlife Trust (YWT) celebrate its 70<sup>th</sup> birthday. YWT owns the site which was its first reserve: the Trust came into existence to receive the Bog as its founding gift from Arnold Rowntree and Francis Terry.

The richness of Askham Bog goes beyond its exceptional biodiversity: it also has a remarkable historical record. Its history can be examined in four phases. The first is the deep history: the origins of the Bog go back to the end of the last glaciation. The ridge along which the A64 runs is a terminal moraine, deposited around 17000 years ago. It runs east-west from Tadcaster to Stamford Bridge and formed a dryland corridor across the vale, which is why the Romans built York where they did: where the Ouse cuts through the moraine is a natural control point.

As the ice melted it carved a deep drainage channel just north of the moraine, which eventually became a lake. Over the next ten thousand years or so, the lake gradually filled in - a natural and inevitable successional process - and on its surface there developed a raised bog, a mound of peat, dependent on rainwater and hence very acid, supporting heather and bog mosses

(*Sphagnum*). We know this because the history of the Bog is preserved in the peat that fills the old lake basin.

That peat record reveals something surprising, which is the next phase of the Bog's history. Much of the raised bog peat is missing: the lower layers are present but abruptly give way to more modern peats. The missing layers, perhaps as much as 3 or 4 m, were almost certainly removed by local villagers, for whom peat would have been a source of fuel. There are 16<sup>th</sup> and 17<sup>th</sup> century bye-laws from Acomb and Dringhouses laying heavy penalties on people who took too much "turf from the moss" or started cutting peat before 4am. A fine of "Xs" (10 shillings or 50p) at that time was severe and suggests that this was a valuable resource.

There was also a requirement to maintain ditches ("moss-dykes"). The system of ditches in Askham Bog is shown on a 1785 map - the oldest we have - and it seems likely that they are mediaeval and were

dug to facilitate the extraction of peat by boat, as still occurred in the Cambridgeshire Fens 150 years ago. It seems unlikely that they are drainage ditches since the lack of a gradient in the Bog basin would make that futile. Either way, these ditches are mediaeval relics.

Peat-cutting at Askham Bog seems to have ceased in or before the 18<sup>th</sup> century and contemporary maps allow us to follow its recovery as a boggy woodland, ushering in the next phase of its history: in the 19<sup>th</sup> century it became renowned for its natural history, attracting naturalists, especially entomologists, from all over the country. Fortunately staff and students from the York Friends' School (now Bootham School) not only loved visiting the site but also recorded what they saw and in 1879 wrote an account of its natural history, published in the Friends' Schools' journal. It is rare to have such a detailed account of the biodiversity of any site from that time.



*Fen vegetation at Askham Bog Photo: Alastair Fitter*

The first half of the 20<sup>th</sup> century was a bad time for the Bog. It was managed as a pheasant covert and for timber extraction and several rare species went extinct. In 1946 a large part was put up for sale and the Rowntree/Terry partnership (both former pupils of Bootham School) bought it and started the long process of recovery. Thanks to YWT's management, Askham Bog is on the path back to its former glory. Much survived the period of neglect and it remains exceptionally rich. Species thought lost are returning and some of its rarest plants are thriving: the colony of gingerbread sedge *Carex elongata* has grown from 250 to 6000 plants in the last 40 years.

The most spectacular creatures at the Bog are the royal ferns *Osmunda regalis*, the biggest of which are 3.5 m high and probably the oldest living things in York. Forty years ago, there were about 20 of these plants and all were large and old - there seemed to be no regeneration. When the history of peat-cutting was discovered it seemed likely that the bare peat this produced might have what the ferns needed to regenerate: the absence of cutting for 200 years would explain the lack of young plants. In the 1980s several experimental trenches were dug to create bare peat and their sides now support many young plants, solving the mystery of the royal ferns.

The Bog has survived many threats and last year rode out another crisis when Barwood Land, a development company, applied for permission to build over 500 houses within a few hundred metres of the Bog. Their success would have spelled the end of the site due both to reduction in the water table and the effects of isolation from the wider landscape. Fortunately City of York Council rejected the proposal. Barwood appealed and even more fortunately CYC fought the appeal at a Public Inquiry last November, backed by a vigorous campaign from YWT and the support of over 7000 York residents. In May we learned that the appeal was rejected and that this remarkable part of York's heritage will survive and, we hope, prosper.

Askham Bog is a wonderful place to go, at all times of year. In autumn for leaf colour and diverse fungi; in

winter for flocks of siskins and redpolls feeding on alder seeds; in spring and summer for the rich and colourful flora and insects. At all times, the place has a special atmosphere, and the background noise from the nearby road and railway only serves to emphasise how extraordinary is its survival surrounded by our developments. It receives over 20000 visits a year (more during lockdown), showing how much the people of York value this special place, and there is a large and active group of volunteers who help to manage it - and help their own wellbeing in the process.



*This Giant Royal Fern Osmunda regalis stands 3.5 m tall and is probably hundreds of years old. Photo: Alastair Fitter*

There is much to be done to secure Askham Bog's prosperity, including expert management from YWT, vigilance against future threats and actions by other agencies (drainage board, Environment Agency, Natural England) to help restore the environment in which it sits. Unusually we know what has been lost and we know how to restore it. Achieving that would be a wonderful demonstration of green

policies but doing so will need the support of and pressure from the people of York.

*Alastair Fitter*

### Visiting Askham Bog

If you haven't yet, Askham Bog is an easy place to visit. There is a car park with cycle hoops by the slip road into York off the A64; Askham Bar Park and Ride which has regular bus services is also close. There are no facilities at the reserve.

Visitors can follow a 1 km boardwalk which is above the water table except in times of extreme flood.

You do not have to be a member of Yorkshire Wildlife Trust to visit, but please consider joining and supporting the organisation that campaigns for a wilder Yorkshire.

## Dendrophilia in the time of covid

In spite of all the restrictions imposed by the current pandemic, the YPS has continued to cheer us all up by keeping in touch with interesting newsletters and other communications, and the organisation of such events as are feasible. On 10th September I joined such an event in the Museum Gardens, along with a dozen or so others. It was a walk led by Peter Hogarth to examine and learn about some especially interesting trees in the Gardens. We did rather more than that, in gratifyingly good weather.

Grateful thanks are due to Catherine Brophy, our Chair, for organising the event, which had to be expanded to two walks so that the groups attending were suitably small, and to Peter who most generously agreed to lead both walks, one after the other. Our group arrived in good time for the second walk and we introduced ourselves as we waited outside the (forlornly shut) Yorkshire Museum. Some people had come considerable distances and we were all well rewarded. As you might say (if you read the more technical account that follows), we certainly received True Service that lovely afternoon.

We made our way to about six trees, examined them in detail and learned about their history, provenance and degree of rarity. Peter modestly proclaimed that he was no expert; I – and I expect the others – would dispute that. My favourite tree in the Gardens has always been the cut-leaved hornbeam, quite near the entrance, so I was glad that was included among our stops. Although some of us may have been a bit slow worming our way around, anyone aware of Peter's truly academic interests in serpents and similar creatures might be

surprised we didn't see one – but perhaps that's for next time?

I had previously noticed some trees in the Homestead labelled as 'Champion' so I was glad to have that term explained: each county, it seems, can identify the best (however that is defined) specimens of the tree species in their area and designate them by that name. The Museum Gardens has more than its fair share of Yorkshire champions, which says something for the people who had the foresight to plant them there.

As an extra, Peter led us to the edible garden, beyond William Smith's geological map; we agreed with him that it is an extremely pleasant area to wander in, and its overgrown state makes it more rather than less attractive. We also agreed with him that the recently installed herbaceous border, although perhaps over its best just then, is a great success. More recently, near that area, I have strolled round the stones on the ground that mark out the extent of the abbey and was pleased to see a little yellow *Oxalis*, like wood sorrel with its trifoliate leaves, growing among them.

The Museum Gardens is always worth a visit; one sees something new every time. As we approach the 200th anniversary of the founding of the Yorkshire Philosophical Society – and thank goodness for its long care of the Gardens! – I suspect we shall see some special activity there.

On which dignified note I should perhaps leave this account but Christmas is not far away; perhaps this time my true love will send to me a pear in a beech tree. That *would* be champion!

*Veronica Wallace*

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Why not take your daily exercise in the Museum Gardens and see the trees for yourself?

## A Walk around Remarkable Trees in York Museum Gardens

*Professor Ewan Anderson and Dr Peter Hogarth*

Walking clockwise around the Gardens from the YPS Lodge this route aims to help you discover some of the remarkable trees in the gardens. Walk straight ahead until the path divides then take the left hand path. Look to your left and you will discover one of the few trees with a plaque still attached. Dedicated to Charles Allen and dated 1972 enabling us to know when it was planted. This is the **Dawyck Beech** *Fagus sylvatica* 'Dawyck'. This narrowly columnar Beech was discovered in the wild in 1864 in woodland at Dawyck, in the Scottish borders. This was the home of Sir John Naesmyth, to whom the design of the Museum Gardens is attributed; all descendants have been cloned from the one original Dawyck tree.

The path divides again; take the left hand path and there on your left is a grassy bank that forms the current flood barrier for the Hospitium and the rest of the garden. Just off this path to your right is one of the champion trees in the gardens: a **Cut leaved Alder** *Alnus glutinosa* 'Imperialis'. A graceful, spreading



*Dawyck Beech*  
Photo: Dorothy Nott

tree with deeply cut leaves. In Spring it has reddish/purple catkins and through winter there are tiny ovoid black cone-like fruits.

Climb up the slope\* on the left of this path; the path itself leads visitors behind the Hospitium where there are two sets of steps, which will also lead you to the top of the bank. From the top of the bank face the river where you will be able to see one of the gardens' most important and rare trees: **True Service Tree** *Sorbus domestica* 'pyrifera'. This is considered to be Britain's most rare native tree, first recorded in 1678 in the Forest of Wyre. The creamy flowers are in clusters; the fruits like small pears, and were made into a drink like cider called cervesia by the Romans. For three centuries its inclusion in the British list depended on this one tree. Then between 1983 and 1991 two indisputably wild populations were discovered: on largely inaccessible cliffs in South Glamorgan and on the Avon cliffs at Shirehampton. The latter area is protected as an SSSI. However, as noted by Oliver Rackham, the earliest botanical record of a plant in a definite

place is the 9<sup>th</sup> century *Historia Brittonum* by Nennius. In it is described an Ash tree with apples found near the mouth of the River Wye. The tree appears in two formae, the fruits of one resembling small apples (pomifera) and the other small pears (pyrifera), as here.

Climb down the bank at the far side of the Hospitium and walk towards the main path from the Marygate entrance.

Before you reach the path look out for the **Tulip Tree** *Liriodendron tulipifera* known for its distinctive tulip-like flowers. This species was introduced, from North America, in the mid-seventeenth century; probably by John Tradescant the Younger. The unusual shaped leaf has four pointed lobes and a flat tip, which turn gold and brown in autumn.

Take the path opposite, which leads to the side of St Mary's Abbey, continue past the abbey, walking towards the Art Gallery entrance. Just past the Geological Mosaic Map you come to the Edible Garden with its Wild Wood. Here you will find young olive trees in an area that has been used for growing food for centuries.

Retracing your steps to the Abbey turn left to the front of the Yorkshire Museum. Here on the left of the entrance, in the flower bed outside the Tempest Anderson hall, slightly hidden by its neighbours, is a **Strawberry Tree** *Arbutus unedo*, which grows wild in Southwest Ireland. The fruits are less appetising than they look, as the Latin name implies: "I eat one".



*Pear Barked Beech*  
Photo: Dorothy Nott

Continue past the Yorkshire Museum, walking towards the Museum Street entrance, on your left is another champion tree the large **Pear-Barked Beech** *Fagus sylvatica* 'Miltonensis'. On this tree, the line of the graft,

which separates the lower Beech bark, from the upper Pear bark is very clear. ‘Miltonensis’ connects to Milton Hall, one of the seats of the Fitzwilliam family. Earl Fitzwilliam, Viscount Milton, was President of the Yorkshire Philosophical Society from 1831 to 1857.

If you look across to the Fern Garden, currently inaccessible, but just before the King’s Manor exit, you will see a **Wollemi Pine** *Wollemia nobilis*. Known from the fossil records of over 90 million years ago; living specimens were discovered in 1994 in a remote valley in the Blue Mountains of Australia. There remains controversy as to whether the Latin name refers to one of the men who discovered the tree, David Noble, or merely implies that it is a noble tree.

Turning your back on the Pear-Barked Beech and looking ahead you will see a **Eleagnus Leaved Pear** *Pyrus elaeagnifolia* which has been so crowded out by its neighbours that it only grows in one direction and looks as if it is about to fall over. The leaves are broader than the normal pear and tinged purple.

Rejoin the main path and on your right you will find a **Narrow-Leaved Ash** *Fraxinus angustifolia* ‘Lentiscifolia’. Prior to being pruned in 2018, this unusual and majestic tree was a champion; it now appears to be in decline. It has also been recorded as a Willow-Leaved Ash so there is some argument about its identity.

\* From the summer of 2021 the “Environment Agency” will be developing flood barriers in the river frontage part of the Gardens so the area behind the Hospitium will not be available. The authors have drawn the EA’s attention to the True Service Tree, which will be carefully preserved in the new flood relief scheme.

*Compiled from information provided by Ewan and Peter;  
any mistakes are my own,  
Catherine Brophy*

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## **Reginald Farrer (1880-1920) traveller, writer, plantsman and plant hunter**

*“The father of modern rock gardening”*

Reginald John Farrer was born in London in 1880. Born with a cleft palate he was mostly educated at home whilst enduring many operations. In 1889 his father inherited the Ingleborough Estate at Clapham in the Yorkshire Dales. Here, when he was only 14, Reginald Farrer created his first rock garden. In 1898 he went up to Balliol College, Oxford, graduating in 1902. While studying there he helped H.J. Bidder make the Rock Garden at St John’s College.

In 1902 he made his first journey to China, Korea and Japan. The visit to Japan, in particular, greatly influenced his ideas about creating rock gardens and resulted in his book *The Garden of Asia*, published in 1904. Around this time he attempted to work as a novelist and poet and although his first attempts were well received his later efforts were not.

In 1907 Farrer published his influential and popular work *My Rock Garden*, which remained in print for many years. In 1914 accompanied by William Purdom, a Kew trained gardener and plant collector, he spent two years in North - West China (Gansu), discovering,

painting and collecting plant specimens and seeds. The area was notoriously unstable and they had to avoid attacks by bandits. Many of the illustrations, seeds and plants were given, on their return, to the Edinburgh Botanic Garden. Many hardy specimens found in British gardens today bear his name.

Back in Britain in spring 1916 and declared unfit for active war service he worked at John Buchan’s Ministry of Information until 1918. In 1919 Farrer produced his two-volume work *The English Rock Garden* and set off on his second plant hunting expedition, accompanied by mill owner Euan H.M. Cox, this time to Burma (present day Myanmar), where he again painted many of his finds and wrote articles for the “Gardener’s Chronicle”. The plants they discovered proved unsuitable for planting in Britain and there were, at this time, other plant collectors sending back more suitable plants and seeds. After a year Cox returned to England and Farrer carried on, with local collectors and guides, settling around Nyitadi, on the Burma/Chinese border. Farrer died here in 1920 and his family later arranged a headstone for his grave with the words “He died for love and duty in search of rare plants”.

Reginald Farrer’s legacy is plants from the Himalayas flourishing in Britain today, including examples of rhododendron and bamboo. In Clapham village plants

such as “*viburnum farrerii*” continue to grow and the “Ingleborough Trail” has been named in his honour. The “Alpine Garden Society” presents its’ “*Farrer medal*” to the best plant in its annual show.

In 2015 “Historic England” undertook an accurately measured and analytical survey of the fabric, layout and history of the remains of the Ingleborough Hall garden. On January 5<sup>th</sup> 2021 members of the Yorkshire Gardens Trust will be able to listen on Zoom to the postponed lecture from Professor Michael Charlesworth on “Reginald Farrer (1880-1920), Botanist: a Centenary Lecture”, which is being hosted in conjunction with the national Gardens Trust.

*Catherine Brophy*

Further reading:

<https://research.historicengland.org.uk/Report.aspx?i=15417&ru=/Results.aspx?n=10&tsk=parks&p=4>  
<https://www.alpinegardensociety.net/reginald-farrer/>

### ***Contemporary Scientist no. 3***

#### **Professor Dave Smith**

Dave Smith is Professor of Chemistry at the University of York, where he carries out research into smart nanomaterials and nanomedicines. Much of Dave’s research attempts to develop systems, which could potentially address healthcare problems experienced by his husband Sam, who had cystic fibrosis and a lung transplant. In particular, Dave is interested in developing treatments for genetic diseases like CF, and developing materials to enable the growth of new organs from a patient’s own stem cells, avoiding problems with transplant waiting lists and rejection. Sadly, Sam passed away in early 2019, leaving Dave as single dad to their adopted son.

Dave is a passionate educator, giving outreach lectures to ca. 50,000 UK school students and developing his own YouTube chemistry channel, with over half a million views. He was named as one of the ‘Top 25 chemists to follow on Twitter’ – as @professor\_dave he has over 15,000 followers. He works extensively for diversity, and was nominated as one of the RSC’s 175 diverse ‘Faces of Chemistry’.



### **May we recommend?**

Since we moved from our large “family” house into a city centre flat four years ago, several of our family (and ourselves occasionally) have, with greater or lesser tact, suggested we REALLY should sort out that roomful of books!

Aren’t we glad we were too reluctant (or perhaps too lazy) to do so ... During the months of lock-down and since, they have been a treasure house – many forgotten, half read, some total discoveries. Many with no memory of acquisition, let alone of actual reading.

We thought if we shared our discoveries, others might, in turn, wish to offer their newly found treasures? These are volumes which, besides being very readable, have given us real **pleasure**, and are not chosen for literary merit (though they usually have that too). So these are our four recommendations for bored YPS members.

#### **Roald Dahl: *Boy*.**

The author’s account of his own schooldays has the magical ability to convey the real feelings of a sometimes very painful childhood.

#### **Simon Winchester: *The surgeon of Crowthorne*.**

How did the first dictionary come to be conceived, and composed? A fascinating possible accompaniment to the recent TV series – “The secret history of writing”.

#### **Deborah Devonshire: *Home to roost & other peckings*.**

Introduction by Alan Bennett. The youngest of the Mitford sisters, she makes unexpected, insightful & amusing comments on her unique life.

AND, our personal favourite ...

#### **Kate Adie: *Fighting on the home front: the legacy of women in World War One*.**

Neither of our mothers were teenagers ‘til the 1920s. They told us lots about that time, but little of being a woman in the war years or before. This is a revelation. Firmly based in her family stories from the North East, Kate Adie details everything at every level; all the events and reactions affecting all women “high & low”. She shows how dogged & bitter, on all sides, was the determination both to prevent and make change. Our mothers in the 1920s had a **totally** different youth to that of their elder sisters only 10 years earlier. The speed of this transition is just amazing.

*Pat & Graham Williamson*



The eagle-eyed may have noticed the Amazon search box on the Members page of our website - [www.ypsyork.org/members-area/](http://www.ypsyork.org/members-area/) As an Amazon Associate the Society earns a small commission from qualifying purchases made via this link.

All you need to do is start your search using our box and any purchases you make during that session will raise funds for the YPS. If you are looking to Amazon for books, Christmas gifts or household items during these unusual times, please do consider helping the Society in this way.

## Special offer!

Of course, for an ideal Christmas gift you need look no further than *'The most fortunate situation': The Story of York's Museum Gardens* by Peter J Hogarth and Ewan W Anderson. This beautifully illustrated book is available from the Lodge; price £25. As a special offer while the office is closed, postage (within the UK) & packing are free. If you give us plenty of notice, we can also gift wrap and post to the recipient!



## Exploration from your armchair

Members who enjoyed Peter Mayhew's excellent January lecture on *Seeking wisdom for a sustainable future through the history of a rare York moth* might like to know that Peter has recently published an interesting article on William Prest, the principal focus of the lecture.

You can read *The Life of William Prest, York Entomologist (1824-1884)* via this link:

<https://mayhewgroup.wordpress.com/2020/09/25/new-biography-of-william-prest-now-published/>

And, if you explore Peter's website, there's lots of other interesting stuff. Look under 'News and Views' and 'Media'. The talk on *'Why are there so many insect species?'* is highly recommended!



*Dark Bordered Beauty Moth*  
Photo: Peter Mayhew

**"Baking in Space – Bake to the Future"** Part of November's Science Week Ireland

Andrew Smyth, aerospace engineer and "Great British Bake Off Finalist" with Dr Niamh Shaw, scientist, performer and space explorer.

They explore our planet in lockdown, how we have learnt to adapt and the parallels between living in Space and living during Covid-19.

A short interview with them on the BA blog – check the YPS news page for further links

<https://www.britishecienceassociation.org/blog/baking-in-space-2020>

This event has been supported by "Yakult" which is itself boldly going into space for experiments with astronauts on the International Space Station in collaboration with Japan Aerospace Exploration agency (JAXA). Their mission is to study the influence of Yakult's bacteria on the human body.

**Museum Crush** *This well illustrated website tells the stories of objects from Museums*

If you have visited "Creswell Crags" you may enjoy this entry – a 6 minute read!

<https://museumcrush.org/unlocking-the-lives-of-ice-age-small-mammals-at-creswell-crags/>

**"Pottery Shop? What Pottery Shop? Rethinking Corbridge from the base up.**

This video on YouTube is with Kevin Booth, English Heritage Archaeologist who gave a talk on Corbridge as part of the "Romans in the North" day, organised by the York Museums Trust in 2019.

<https://youtu.be/VUCDTmUuoUk>

## Theatre of Science

For the young and young at heart, YouTube explanations of everything from the Big Bang (with help from a Lego Einstein) to conkers (poisonous to eat but can be used as a detergent)!

[www.theatreofscience.co.uk](http://www.theatreofscience.co.uk)

## YPS website

Now that our lecture season is underway, keep an eye on the Past Events section of the YPS website What's On page - [www.ypsyork.org/resources/past-events/](http://www.ypsyork.org/resources/past-events/) - where you will find lecture reports from members and any additional material provided by speakers ...

... and don't forget the 'Clerk in the Country' blog continues weekly with nature observations, farming life and snippets of rural history:

<https://www.ypsyork.org/blog/>

From recent entries:

"... intermittent small explosions from the fields behind the house signify either a slow invasion from the north or that a "gas gun" is scaring flocks of pigeons off newly planted cereals ..."

"Moppet chose to ignore my frantic signals from an upstairs window, jumped lightly onto the top of the wall and gave that tempting tail a tap with her paw. What turned to face her was no dove, politely regretting being in the way. Cats have claws but this creature had talons."

"The late 18<sup>th</sup> century was another time when farmers turned to flax. To encourage domestic production and reduce reliance on imports from the Low Countries, the government set up a bounty scheme, paying 3d per stone for hemp and 4d for flax."



## Answers to Favourite Quiz Questions

See page 3 (With thanks to Peter Hogarth, Dorothy Nott and Pat Williamson)

1. *Not* the Blue Whale – a mere 25 metres from nose to tail. The Bootlace worm, *Lineus longissimus* – the clue is in the name – has been recorded at around 55m, or two whale-lengths. It belongs to the phylum Nemertea, unrelated to earthworms, roundworms, flatworms, or any other worm you can think of. Being very long and thin poses all sorts of interesting problems: how does the front end ever know what the rear end is doing? When one *Lineus* meets another, how does it know that it's not meeting itself?
2. No, not Charles Darwin! Robert McCormick, ship's surgeon. Not much is known about him, except that he left the ship at the earliest opportunity, ostensibly through ill health, but probably because he had fallen out with Captain Fitzroy (not hard to do). Darwin was taken aboard as a supernumerary, largely as a socially acceptable companion to Fitzroy.
3. Robert Recorde in the 16th century. A medical doctor as well as mathematician, he introduced the equals sign in his book *The Whetstone of Witte*. He died in the King's Bench Prison, Southwark, after being arrested for debt.
4. By applying high performance filters to the chimney stacks of the plutonium production reactors - (known as Cockcroft's folly).
5. Because of its high intelligence, the common octopus, which can learn to unscrew a jar ... or eight. Other cephalopods (squid, cuttlefish, nautilus) have since been added.
6. Dijon, Munster, & Nanjing. Officially twinned are Dijon (France) since 1953, Munster (Germany) since 1957 & Nanjing (China) since 2016. We are also in "temporal twinning" with Jorvik, but have no confirmation of this!
7. Mistletoe. The Minster is said to be the only British cathedral to do this. Mistletoe is to represent friendship.
8. W H Auden. Auden came to the notice of the "general public", when "Funeral Blues", better known as "Stop all the clocks" was read in the 1994 film "Four weddings & a funeral". He retained dual nationality, but apparently this did not count!
9. George Hudson. It was in a discussion about the age of the bones found in the Kirkdale caves. Clearly the Dean felt the discussion was challenging the Scriptures ...
10. Berwick Kaler.

## Archaeology Prizes 2020

We were delighted to be able to award our archaeology prizes this year to two University of York students whose dissertations achieved outstanding marks.

The Charles Wellbeloved Prize for undergraduates was awarded to Yannick Signer for his dissertation *Agricultural Change in Early Medieval Yorkshire: A Landscape Approach*, while the postgraduate Herman Ramm Prize went to Harry Platts for his MA dissertation *Halls of governance and community: A spatial analysis of public buildings in late medieval Essex*.

Sadly we were unable to hold our customary presentation but the winners were announced online by Professor Nicky Milner before our Zoom lecture on 17<sup>th</sup> November: **New Light on Roman Yorkshire: work by students at the Department of Archaeology** by Steve Roskams.

Our congratulations to both winners.

## YPS Subscription Renewal

For members who pay their subscriptions by cheque, cash or Paypal, guidance on how to renew for 2021 can be found on the enclosed form (which will follow separately by email if you're reading this online). We would be grateful if you could return this to the office at the Lodge by Friday 18<sup>th</sup> December to enable prompt processing.

If there is no form enclosed, this means your subscription will automatically be paid by standing order or has already been paid by other means, and you need do nothing.

*Owing to Covid-19 restrictions 2021 membership cards will be sent out with our second newsletter of the year in April. Your 2020 card remains valid until then, so please retain it.*

If you have any questions about your subscription, membership category or how to renew, please contact Frances on [info@ypsyork.org](mailto:info@ypsyork.org) or 01904 656713.

**Thank you very much to those who have already renewed. Your continuing support is particularly appreciated in these unusual times.**

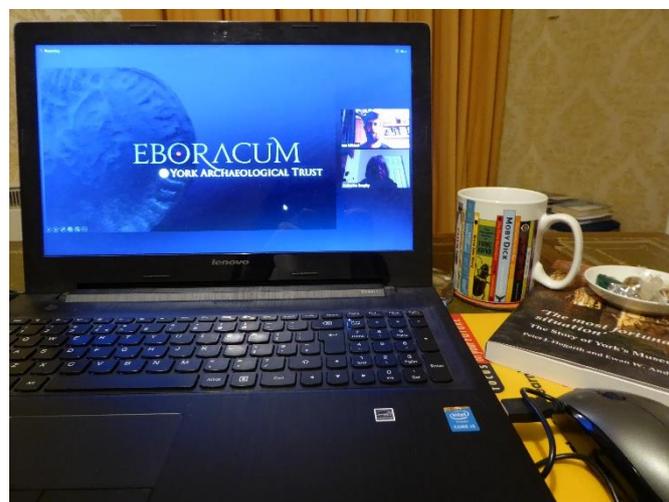
## Zoom! All you really need to know to attend a YPS online lecture

If you see the word “Zoom” and immediately think “Definitely not for me”, “I won’t be able to manage that”, “I don’t know enough about computers”, read on!

Under present pandemic restrictions anyone wanting to put on an event for an audience has little alternative to going online. If you belong to a few groups or societies, you’ve probably received a number of instruction sheets for Zoom talks already, each slightly different, and - for those of us who are tentative computer users - looking forbiddingly complicated. The best piece of advice I’ve ever received from a “computer expert” is that the only way to break one is to throw it out of the window. Keeping that in mind and windows firmly closed, what follows is all you need to know to “attend” a YPS Tuesday evening lecture or monthly Café Scientifique session. So ...

What you need::

- A computer or laptop (model: mature – should be fine; vintage – still well worth a try; pretty new because you like to upgrade regularly – you don’t need these instructions).
- Technical requirements: the ability to receive emails, connect to the internet and hear sound.
- Alternatively a tablet, smartphone or some other device you can use to connect to the internet and receive emails, but a computer is better because of the larger screen.
- A kettle.
- Tea/coffee or similar.
- Chocolate or your favourite treat.
- A good book you’ve been getting round to starting.



What you need Photo: Frances Chambers

What to do:

1. If you're already on our emailing list, you should have received invitations to lectures a couple of days beforehand. If you haven't been getting them or are not sure, ask to be added to the list by sending a message to [info@ypsyork.org](mailto:info@ypsyork.org).
2. If you're planning to watch on a tablet or smartphone, you'll need to download Zoom in advance. Go to the website and follow the instructions <https://zoom.us/download>.
3. If you've seen people using Zoom on TV, you may feel you should prepare your background by positioning yourself in a quiet room in front of an interesting bookcase or particularly successful pot plant. For our lectures nobody will be able to see or hear you, so you can sit wherever is most comfortable and keep your phone switched on.
4. At 7 pm on the lecture evening, switch on your computer.
5. While it's warming up, make a hot drink.
6. Go into your email inbox and find the one about the lecture. About halfway down there will be a link to the lecture. It looks like gobbledegook and the arrow turns into a hand. Click on this.
7. You should see a dialog box and/or a question on screen about opening a Zoom meeting. Click Open or Join Webinar, as instructed.
8. Next, a box asking for your email address and name. Fill these in and follow any instructions. It's best to use your own name, please, so that the YPS coordinator will know you are genuine. Using Minnie Mouse or Donald Duck makes us worry that we're being infiltrated by cartoon characters!
9. If nothing happens, it's probably an incorrect link which is our fault, not yours. Send us a message of complaint and spend a pleasant evening with chocolate and your book. Zoom is new to us too and we're learning all the time so it helps to know if there's a problem.
10. You should now either see a message that you are in a waiting room, in which case you just need to wait, or be able to see and hear a couple of people and perhaps the first slide of a presentation. If the people are discussing the weather, all is going well. If they are asking each other what to do in anxious tones, things are not going smoothly, but don't worry; it's nothing to do with you. Nibble some chocolate and read the blurb on your book cover.
11. If nothing happens or after connecting everything disappears, don't give up, just wait for a while. The computer hosting the lecture may have lost its internet connection or been thrown out of the

window. Again, nothing to do with you; just keep going with the tea, book and chocolate.

12. While waiting for the start, it's worth moving the arrow around your screen and clicking on the things you find.
  - i. Probably at top and/or top-right will be ways to change the appearance of your screen. A square symbol labelled View gives a choice of whether you can see the speaker, chair and other organizers at the same time or just whoever is speaking. To make the presentation as big as possible, choose Full Screen and opt to see only the speaker.
  - ii. A couple of useful things should be at the bottom of the screen; you may need to move the arrow around to get them to appear. Chat can be used to send a message to the speaker or chair, for example if the speaker asks a question of the audience. Click on it and a box for typing will appear. Make sure you're sending to panellists only; selecting "all attendees" will make your answer visible to the whole audience. In Q&A you can type a question for the speaker to answer at the end. Unlike a "live" lecture you don't have to remember your question until the microphone is handed to you but can send it in when it occurs to you.
  - iii. Probably at bottom right of your screen will be "Leave". Click on this to switch off the lecture at the end or when you want to finish watching. Don't worry if you forget, because you will be disconnected centrally at the end of proceedings.

There, you've attended your first Zoom lecture ... or read a chapter of *War and Peace*!

Do contact us if you don't succeed. We're not experts but may be able to advise from our own experiences. It's also been suggested that we run a simple practice session, so please let us know if this is something you would be interested in.

*Frances Chambers*

If further encouragement is needed, here are some of the comments we've received following our first three Zoom lectures: "Our congratulations for such a smooth and well organised presentation" "It all worked splendidly, you made it very relaxed, and I thought the lecture was one of the best ever" "It was a very satisfactory experience from the luxury of a sofa at home" "It was my first Zoom lecture so thanks for making 'the link' setup straightforward" "It's a whole new world with lectures on zoom!"

***Now all you need to do is note the lecture dates over the page ...***

## Diary

Please note that there have been several changes to events listed in the printed programme distributed with our August newsletter. The following is correct at time of going to print but details may change and we continue to add new events. For the most up-to-date information, please check the website:

www.ypsyork.org

2020

**Tues 1 Dec, 7.30 pm – YPS Lecture**

**Dealing with hardship: stress and resilience in Covid-19 era**

Professor Christina van der Feltz-Cornelis, University of York *Zoom*

**Wed 2 Dec, 7.30 pm – Café Scientifique**

**The Geology of North Yorkshire**

Paul Hildreth, President, Yorkshire Geological Society *Zoom*

**Wed 16 Dec, 7.30 pm**

**The YPS Zoom Quiz for Christmas**

**Thur 24 Dec**

Frances on holiday. Back at work on Tue 5 Jan.

2021

**Wed 20 Jan, 2.00 pm**

**A virtual tour of Bletchley Park**

**Tues 26 Jan, 7.30 pm – YPS Lecture**

**Title to be confirmed**

Professor Laurence Wilson, Dept of Physics, University of York

**Tues 9 Mar, 7.30 pm – YPS Lecture**

**The Enemy Between Us: The Impact of Inequality**

Professor Kate Pickett & Professor Richard Wilkinson  
(*re-scheduled from 21 April*)

**Tues 23 Mar, 7.30 pm – YPS Lecture**

**Title to be confirmed**

Dr Christopher Ridgway

**Tues 27 Apr, 7.30 pm – YPS Lecture**

**Relative sea-level changes and the history of the Greenland Ice Sheet**

Dr Sarah Woodroffe, Associate Professor, Department of Geography, University of Durham (*re-scheduled from 5 May*)

**Wed 5 May to Sat 8 May**

**Cambridge & Sutton Hoo Study Tour**

**Tues 22 Jun, 2.00 pm – Annual General Meeting**

Tempest Anderson Hall, Yorkshire Museum, York  
This will be followed by a lecture.

**Tues 9 Nov to Thur 11 Nov**

**A Stratford-upon-Avon Tour with a difference!**

*Zoom lectures – details for each lecture will be sent to members by email. We are aware that our present limit on number of participants has meant that for popular lectures some have been disappointed. We are exploring ways to increase our limit and also looking into recording the lectures and making them available on a YPS YouTube channel for viewing after the event. We are grateful for your patience while we look into the best options.*



*Season's Greetings & warmest wishes to all our members*

### 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](mailto: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](mailto:info@ypsyork.org)