



Ussher Society

Newsletter – Autumn

2019



From the Secretary



Work at a Lithium exploration site in Cornwall taken from <https://cornishstuff.com/2019/09/17/lithium/>

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Secretary for the Ussher Society - secretary@ussher.org.uk

Dear Membership,

What a year 2019 has been so far for going Green and campaigning for Climate Change! During 2019 climate change has leapt into the headlines and now is seen by many and a critical issue for the modern age. The young are actively campaigning and talking to the streets and the government in June 2019 pledged that the UK will cut greenhouse emissions in the UK to almost zero by 2050.

In the first quarter of 2019, according to UK energy statistic, renewables (wind, solar, hydro and other renewables) accounted for 35.8% of the energy generated. But renewables alone are unlikely going to see us meet such an ambitious target. Identified as a crucial component to meeting the UK's 2050 target is the removal of petrol & diesel vans from our roads. For this to happen we need the development of a new generation of electric driven cars, and Cornwall and its geology could be a key element of achieving this.

In an article on the Cornish Stuff website <https://cornishstuff.com/2019/09/17/lithium/> it is quoted that *"The global change to electric vehicles is not only driving the development and efficiency of lithium batteries but also the need for the metal itself. Because of this, Goldman Sachs called it "the new gasoline" and suggests demand could triple by 2025."*

Cornwall is spearheading efforts in the UK to explore for and develop ways to commercially extract lithium. This is because of the widespread presence of lithium enriched granites. In mid-September 2019 MetAmpere, became the first company to drill lithium exploration holes in the UK, and they went on to describe their test results from Cornwall as *"staggeringly good"*. Lithium is needed to make batteries which will be key in making renewable energy sources a viable contributor to everyday life.

Another organisation in Cornwall exploring for Lithium is Cornish Lithium. Their exploration approach differs from that of MetAmpere, in that they are focusing on lithium within the hot springs that naturally occur beneath the surface in and around Cornish granites.

With best wishes, look forward to meeting many of you at the annual conference in January 2020.

Chair's Chat - Andy Fleet

With this newsletter comes the first circular for the 2020 conference which will be held near Exeter. Following discussion by the committee and at the AGM, the presentation days have, slightly unusually, been set for a Monday and Tuesday (6th and 7th January). It is hoped this steers clear of the family holiday season and does not cut into university terms. As an innovation this year you can save money by booking the conference at an Early Bird rate up until 30 November.

2020 marks the 100th anniversary of Ussher's death. Part of the conference will therefore celebrate Ussher and contrast how the geology of south-west England is viewed today with how it was seen in Ussher's time. The Scott Simpson lecture by Robin Shail will take up this theme. It is also intended that the field excursion day on Sunday 5th January, which will proceed the presentation days, will link to Ussher's work. Any offers of presentations related to Ussher, whether historical or viewing contemporary research in the light of his legacy, will be very welcome.

The Society has received a significant donation from the Chris Cornford's family. I am sure you will remember Chris' enthusiasm for the Society, the geology of the south-west and his many contributions to Society events at conferences and in the field. The donation will be ring-fenced in a Chris Cornford fund and used in the first instance to promote student involvement with the Society.

As those of you who have attended the last two AGMs will know, there have been ongoing difficulties over the last few years with attracting enough publishable submissions to fill volumes of the Proceedings, despite the sterling efforts of our editor Malcolm Hart and his predecessor. Currently things are no better with Malcolm having only received a couple of papers and a few abstracts so that a volume of the Proceeding is just not viable. The situation has arisen over recent years in no small measure due universities expecting and directing their staff to publish in "high impact" journals. This is not likely to change. The committee has therefore accepted the inevitable and agreed that papers submitted to the Society will have to be published online on the Society's website going forward as discussed at the last AGM. It is hoped that as many conference presenters as possible will give permission for their abstracts to be published on the website (please see the contribution page of the conference circular to do this). There will still be the opportunity to submit a paper after the conference or an extended abstract for publication via our society website.

I look forward to seeing you at Exeter in January. Don't forget the opportunity to make a saving with Early Bird registration.

Committee Changes

At the AGM 3rd January 2019, Jenny Bennett stepped down from her second stint as vice Chair of the Society and at the same time left the society committee. Also, Frank Howie relinquished the role he had held as treasurer for 4 years. The role of vice-Chair is now held by David Roche, and Kate Smith will serve as the new treasurer for the coming year. The committee thanks both Jenny and Frank for their service and commitment to the society over the years.

We have one other new member to welcome to the society committee, who is Beth Colgan. Beth comes to us from an industry background working currently for Cornish Lithium Ltd. as an exploration geologist.

New opportunity to Join the Society Committee:

At the upcoming AGM, to be held in The Devon Hotel, Exeter on the 6th January 2020, David Allen will look to step down from the committee. If you have a desire to be involved in the society and have an aspiration to assist in its running and events the society holds then please let me know ahead of time. If you would like any more information on what is involved in being a member then please contact me on: secretary@ussher.org.uk

Note About GiSWE

As you will all be aware, the Society for the past couple of years has struggled to encourage and ensure enough submission of scientific material to produce a physical proceedings of Geoscience in South West England. As our chair mentioned in his chat piece above, this is in no part due to lack of trying and the sterling efforts of our editor Malcolm Hart and his predecessor. The situation has arisen over recent years in no small measure due universities expecting and directing their staff to publish in “high impact” journals and this is not likely to change in the short term.

Following extensive debate at the last AGM and internally the committee has accepted the inevitable, regrettably, and agreed that papers submitted to the Society will have to be published online on the Society’s website going forward. Along with submitted papers the society will also (given permission) look to publish conference abstracts and extended abstracts which arise following a conference talk.

The aims of the Ussher society as with GiSWE, remain the same, that the society wishes to promote research into all aspects of the geology and geomorphology of South-West England and sharing of the knowledge gained with other likeminded people. Looking forward the society aims that material submitted, as was previously with GiSWE, will have access to the same readership i.e. the society membership and after a 3-year period will be available to anyone publicly (the implementation of this goal [i.e. the website] will be discussed at the upcoming AGM).

To accommodate

Submission of work for publication on our website will still offer the author:

- Free processing of work into a typeset

It would also be helpful if all members will encourage **colleagues** and **research students** to submit papers, even if these individuals are not (presently) members of the Ussher Society. **GiSWE as a publication continues to offer:**

- No page charges
- Full colour production.
- A provided PDF of the final paper to all authors for personal use (though these should not be listed on websites (such as Researchgate) until the is over and we name GiSWE available for download from the website.

Change of Treasurer's Address and Membership Fees

Please note that the Treasurer's temporary address with immediate effect is:

Treasurer
Dr K. Smith
Ussher Society (Hon Treasurer),
Nampara,
Vogue,
St. Day,
Redruth,
TR16 5NH
U.K.

Change of Society Membership Fees

Please send your cheque, made out to the Ussher Society, to the address above or through your bank (the Society's bank account is HSBC, Ussher Society, sort code 40-20- 30, account number 91039059). Should you wish to discontinue your membership please inform the Secretary and Treasurer as soon as possible.

The current subscription rates are as follows:

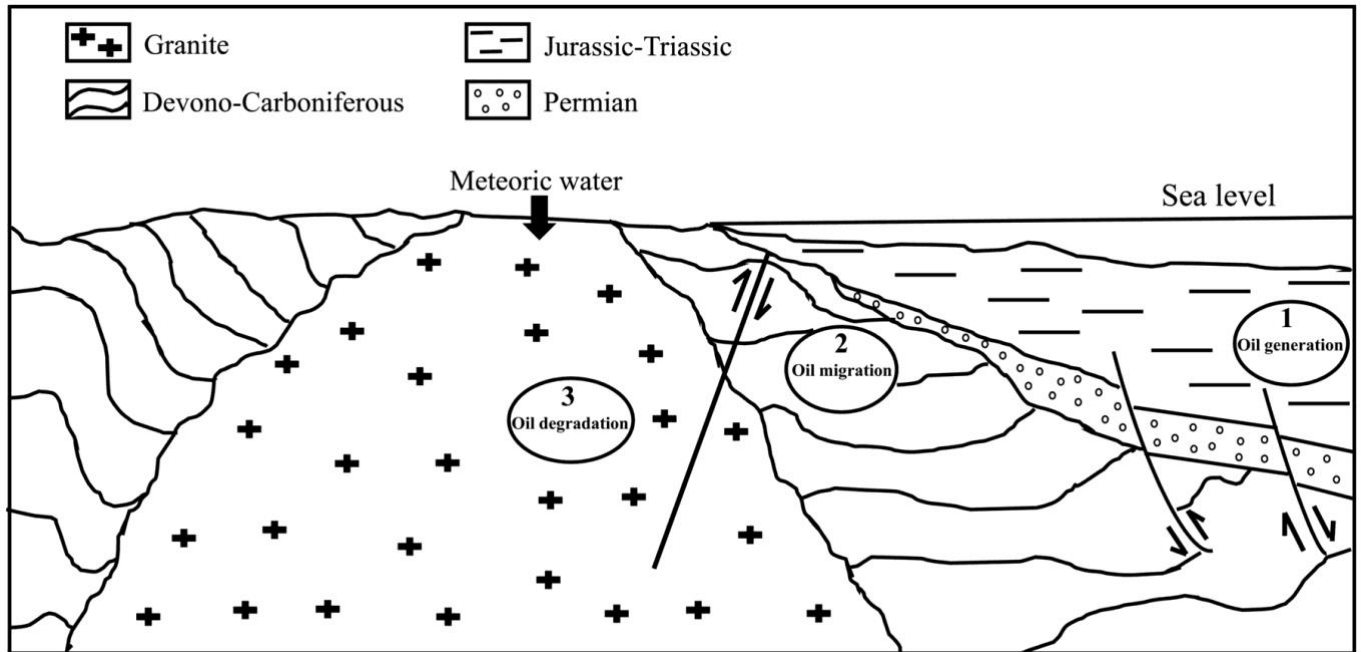
- Full membership rate is £30
- **Retired membership is £30**
- Student membership is £12

It would be helpful if the few members currently not paying by Standing Order would do so and a link to the Standing Order form can be found on the Society's membership page - [http://www.ussher.org.uk/Ussher Society Membership.htm](http://www.ussher.org.uk/Ussher_Society_Membership.htm)

Oil in Granites

The following is a regional paper of interest published in Petroleum Geoscience, Vol. 25, (3), 298-305.

Abstract: Oil residues in Variscan granites in Cornwall, SW England, preserve biomarker data which indicate an origin from marine source rocks. The biomarkers also indicate a thermal maturity that excludes an origin from the Devonian-Carboniferous rocks intruded by the granites but is similar to that of Jurassic-sourced oil to the east in the Wessex Basin. A suite of five different samples from the South Crofty tin mine are variably biodegraded, implying alteration after emplacement of oil in the granite. These characteristics are compatible with models for updip flow of fluids from offshore Mesozoic sediments into older granite topographical highs.



Schematic model of hydrocarbon generation, migration and degradation in SW England (context adapted from [Psyrillos et al. 2003](http://www.sciencedirect.com/science/article/pii/S001671410300103X)).

Here is the link to the Baba et al., 2018 Petroleum Geoscience, 25, 3. Open Access Paper:
<http://mr.crossref.org/iPage?doi=10.1144%2Fpetgeo2018-053>

Somerset Geology Group – Local Geological Sites Project

The local Somerset Geology Group (<http://wp.somerc.co.uk/specialist-groups/somerset-geology-group/>) are currently working with the Somerset Environmental Records Centre (SERC) and Somerset Wildlife Trust to review Somerset's c 230 **Local Geological Sites** (LGS). This project is in total expected to take 5 years and relies on the efforts of volunteers to identify and work towards safeguarding some of the Somerset's best sites for geology. The project is now in Yr 2 and please see project update no. 7 (April 2019 for the LGS Yr 2 report (April 2018 – March 2019)). <http://www.somerc.com/wp-content/uploads/2019/04/Update-No-7-April-2019.pdf>

Over the next two years the plan is to cover, investigate and record within the Mendip District, including sites in the Sedgemoor part of the Mendips AONB in year 3 and then pending progress, cover south Somerset as the priority for Year 4 (2020/21).

Events of interest to members

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| 5 th -7 th January | <p>Ussher Society Annual Conference 2020
 The Ussher Society 59th annual conference, held at the Devon Hotel at Matford, Exeter, Devon, EX2 8XU.
 http://www.ussher.org.uk/Ussher_Society_Conference.htm for bookings forms and forms to register to submit a talk / poster.</p> |
| Sat 12 th October
12:45-5:00pm | <p>Mendip Rocks Festival – Geo lecture day at Somerset Earth Science Centre (SESC) as part of SESC's tenth anniversary. http://www.mendiphillsaonb.org.uk/event/10th-anniversary-geo-lecture-day-at-somerset-earth-science-centre/ tickets £20 book through this link</p> |
| Sun 20 th October
10:00-4:00pm | <p>Mendip Rocks Festival - Explore Ebbor Gorge – booking essential (use link)
 http://www.mendiphillsaonb.org.uk/event/explore-ebbor-gorge/</p> |

Next Edition

I will look to produce another newsletter **Spring 2020**. If you have any knowledge of events which you think may be of interest to your fellow Ussher Members or geological news items which have occurred throughout the South West region, please send them to me for inclusion in the next newsletter by the **By the latest 15th March**. Thank you. secretary@ussher.org.uk