Trilobite







In this issue

- 02 Forthcoming Friends' events
- 04 Cambridgeshire Geological Society forthcoming events
- 05 New Director for our Museum
- 06 Mammoth discovery on the A14
- 08 In Memoriam: Dr Lewis Moysey
- 10 Adam Sedgwick's boots
- 11 Event booking form
- 12 Membership application form

The Forbes Building takes shape at Madingley Rise



With foundations laid and steelwork in place, the Sedgwick Museum's new Collections Store is currently on track to start transferring more than 100,000 rock and fossil specimens into their new home in the autumn. Once completed, the new Forbes Building will enable the Museum to significantly increase and improve access to their internationally important collections for research, study and public engagement.

Sedgwick Museum of Earth Sciences, Downing Street, Cambridge CB2 3EQ

Opening hours: Monday to Friday 10am–1pm & 2pm–5pm Saturday 10am–4pm

🖀 (01223) 333456 🖂 sedgwickmuseum@esc.cam.ac.uk 🏚 www.sedgwickmuseum.org Friends of the Sedgwick Museum friendsofsedgwickmuseum@esc.cam.ac.uk

https://www.facebook.com/Friends-of-the-Sedgwick-Museum-508873495923670/



Registered Charity (No. 1091393)



Editor: Peter Friend







Sub Editor: Alison Holroyd

FRIENDS FORTHCOMING EVENTS

Unless otherwise clear, Friends talk events will be held in the Department of Earth Sciences, Downing Site, Cambridge CB2 3EQ. The doors to the department will be opened at 6.15pm for tea/coffee, and the talk will start promptly at 7pm. Please try not to be late, in spite of Cambridge traffic congestion, because our doors have to be locked at 7pm.

Cars may be parked on the Downing Site during these events. The entrance for cars is from Tennis Court Road, opposite the back entrance to Pembroke College, through the "Visitor's" barrier gate. Identify yourself as attending a "Friends of the Sedgwick Museum" event, if requested by security. After the talk, cars must leave using the exit barrier at the other (Downing College) end of the site. The barrier will open automatically as the front of your car approaches the bar.

Members attending a Friends talk are asked for a donation of £2 each (or £3 for non-members).

Please note that events with a star * need to be pre-booked. Please use the standard booking form which is found on Pg.11 of this Newsletter

February – June 2019

Tuesday 26 February: Two legs or four? How did reptiles evolve into dinosaurs?

Talk by Luke Grinham, PhD student. Doors open at 6.15pm for 7pm.



Wednesday 20 March: Adam Sedgwick Birthday Celebration Dinner*

Thanks to the discussions last year, we have arranged that this year's celebration will take place in Jesus College, where we will have the use of the old paneled upper hall. Parking is possible for the evening in the College grounds. We will gather from 6.30 pm, ready to dine at 7.30pm.

The After-Dinner speaker will be Professor Simon Redfern, Head of the Department of Earth Sciences.

The cost of the meal will depend on whether you opt for a with-wine or a soft drinks option. The cost for the full three - course meal with-soft-drinks will be £49.50 and for the with-wines option will be £58.50.

Please complete a <u>Dinner Booking Form</u> (attached separately with this issue of Trilobite) and send it to our Dinner Registrar: Margaret Sanderson, 157 High Street, Chesterton, Cambridge, CB4 1NL, along with your cheque.

Tuesday 23 April: Committee Meeting

6pm, Department of Earth Sciences

Saturday 25 May: Bus trip to explore aspects of the Brecklands of Norfolk and Suffolk*

Led by Tim Holt-Wilson, author of the recent splendid guide.

As with recent landscape day trips, we will hire the Carriageway 29 seater bus, meeting up at 10 am at the Madingley Park and Ride Site. Please bring refreshments with you. The bus will take us to Brandon Country Park where we will meet Tim Holt-Wilson, collect guide books, if required, and enjoy further refreshments. Tim will select from various optional walking circuits to see key aspects of Breckland landscape. Further driving may then take us to Kettishall Heath to see periglacial soil stripes, and evidence of pre-Anglian very large rivers, or to Cranberry Rough near Hockham, where late lake deposits can be seen. Returning via Brandon, our bus should get us back to Madingley by about 6 pm.

Please register to join this trip using our Booking Form, and sending it to our Registrar: Dr David Peel, Holly Tree House, 21 Bell Road, Bottisham, Cambridge, CB25 9DF. Please send a cheque for £20 to cover the cost of a seat on the bus, and make a small donation to our Museum.

Tim's excellent guide to the Brecklands, 45 pages, all colour, full of maps, paintings, diagrams etc, is available free, by sending an A4 envelope self-addressed, with postage stamps for £1.86. Send to the Brandon Country Park Visitor Centre, Bury Road, Brandon, Suffolk, IP27 OSU (t: 01842-810-185)

17-23 June: Visit to the Western Alps of France*

Dr Mike Tuke (Registrar) and Christine Brouet Menzies have largely finalised the arrangements for this tour to explore the structure and geology of this classic mountain range. The membership list is now complete, and accommodation arrangements have been made.

Tuesday 25 June: Annual General Meeting

6pm in the Department of Earth Sciences. Local Friends, please, try to attend. The AGM provides an important opportunity to discuss future activities.

September - December 2019

Saturday 7- Tuesday 10 September: Field days around the North Yorkshire Moors

Exploring the latest exciting developments on Potash mining, the classic Jurassic coastal localities around Teeside, Whitby and Scarborough. We shall stay at the Holiday Fellowship Hall in Whitby, travelling to arrive at the Hall on the Saturday morning, and leaving on the morning of Tuesday 10th September. Please register to join this trip with: Margaret Sanderson, 157 High Street, Chesterton, Cambridge, CB4 1NL or by email to margaretsanderson285@outlook.com.

Tuesday 8 October: Committee Meeting

6pm, Department of Earth Sciences



Tuesday 22 October: Gertrude Elles, Cambridge pioneer in geological research and University life

Talk by Jane Tubb, Open University. Doors open at 6.15pm for 7pm.

Gertrude Elles, 1893 Isle of Man Ref: Sedgwick Club Archive, SGWC 2/2/11

Tuesday 5 November: Geological History of Britain and Ireland

Talk by Dr Nigel Woodcock, University of Cambridge. Nigel is author and editor of recent editions of the highly regarded textbook with the same title as his talk.

Doors open at 6.15pm for 7pm.

Tuesday 19 November: Tales from the Arctic: a chronology of Baffin Island

Talk by Dr Owen Weller, University of Cambridge. Doors open at 6.15pm for 7pm.

Tuesday 3 December: Friends' Christmas Party

This event has been especially successful in recent years, thanks to the programme of short and entertaining talks by the students of the Sedgwick Club, about their adventures round the world, and thanks also to the Christmas refreshments and Raffle arranged by the Committee. Carol Franklin and Margaret Sanderson have arranged the latter. It would help planning if members could register ahead, enclosing a cheque for £9/ head made out to the "Friends of the Sedgwick Museum". Please send this, ideally by 22 November, to: Carol Franklin, 273 Wellbrook Way, Girton, Cambridge, CB3 OGL. Any surplus from the refreshment costs will add to our Museum support funds. The more members and their guests who come the more enjoyable the party will be and the more we will support our Museum.



www.cambsgeology.org Affiliated Group of the Geologists' Association

Monthly Talks Programme March – June 2019

The Society meets at The Friends Meeting House, 91-93 Hartington Grove, Cambridge CB1 7UB

Talks start at 7.30pm and doors open at 7.00pm

Visitors (£3 per person) and Members (free) are welcome

Contact: Franziska Norman, Programme Secretary info@cambsgeology.org

Monday 11 March

"The explosive history of the Galapagos Archipelago" Matthew Gleeson, PhD student, Department of Earth Sciences, Cambridge

The Galapagos Archipelago is one of the most volcanically active regions in the world with eruptions occurring approximately every 2-3 years. This volcanic activity is spread over a large geographical area resulting in a wide range of magmatic processes, which will be explored in this talk.

Monday 8 April

TBA – please check <u>www.cambsgeology.org</u>

Geoweek 4-12 May

Look out for news of events including a 'gentle' walk on the Fen Edge Trail.

Monday 13 May

"Rapid erosion in the Arctic impacts the modern cycling of atmospheric carbon-dioxide"

Dr Emily Stevenson, Department of Earth Sciences, Cambridge

Monday 10 June

"Basalt, Beasts and Béates – geological (and other) stories from the Haute-Loire in the Massif Central" Martin Evans, Cambridgeshire Geological Society.

The Massif Central is Europe's largest volcanic region and the Haute-Loire department's geology is rich and varied, including several different forms of (extinct!) volcano and other igneous extrusions. The talk will provide an overview of the key features, including setting Haute-Loire's geology within that of the Massif Central overall. It will also make mention of notable aspects of Haute-Loire's human history in this remote and wild part of France, such as the havoc wreaked in the mid-18th century by the terrifying Bête du Gévaudan, the remarkable community support services provided from the 17th to the 20th century by the women known as Béates, and the internationally-recognised protection of refugees during WWII.

Martin has travelled extensively in the Haute Loire for many years.

New Director for our Museum



Liz in the very first issues of Trilobite in 2000, and as she takes up her new post

New Director Dr Liz Hide took up her role on 1 January 2019. For the past 15 years, Liz has been Museums Officer for the University of Cambridge, a Curator at the National Museums of Scotland, and a freelance museum consultant; prior to that she project managed the redevelopment of the Sedgwick Museum galleries opened by David Attenborough in 2002. Here she writes about her vision for the future of the Sedgwick.

When thinking about what I might write to you all, I had a little dig around in my own personal archive and came across the very first issues of Trilobite, dating from 2000. Originally set up as a way of keeping people informed during the gallery redevelopment, within a few years the newsletter had evolved into a joint Museum/Friends' publication, and I'm delighted to see it continues to this day. There on the front page of the first edition is a brown-haired version of me under the headline 'Things are changing in the Sedgwick'. Oh, what comes around, goes around!

19 years later, it's a privilege to be writing this as the first full-time Director of the Sedgwick Museum. What I wrote in that first edition of Trilobite still stands: 'Our aim is to make the museum an exciting, comfortable and accessible place for all our visitors, while retaining something of the specimen-richness which makes the Sedgwick so special'. This remains at the heart of my vision, but now we have the opportunity to develop and extend the Museum's work, and to better align it with the aims of the Department of Earth Sciences and the wider University, as well as making a positive impact on the lives of many people. Over the next few years, one of my priorities will be to ensure that the Museum reaches a really wide and diverse audience, and to reduce barriers, both physical and psychological, that prevent people visiting us. We will be broadening our programming, and making sure we are proactive in reaching communities and groups that don't currently engage with us, as well as responding to opportunities to take our work to wider audiences.

I will be working with the Sedgwick team to increase the use of the collections for research, both by Cambridge researchers, and internationally – and the exciting new Forbes Building will be part of that work. And thirdly, I will be building on the support and opportunities we already provide for students, in particular those who may be facing particular challenges or barriers. We are hugely grateful for the contribution that volunteers make to the Museum, and I am keen to develop more opportunities for volunteers to be part of our work. I look forward to working much more closely with museums across Cambridge through the University of Cambridge Museums consortium, and behind the scenes, I will be working with the Department and the University to increase the financial resilience of the Museum, ensuring it can continue its work well into the future.

I am hugely grateful for the support that the Friends already offer to the Museum, from the purchase of equipment and enabling new exhibitions to support for student placements. I hope as I develop a new Strategic Plan for the Museum, that the Friends will continue to be part of that vision.

Dr Liz Hide, Director of the Sedgwick Museum

Mammoth discovery on the A14



Ice Age Rhino Skull ©Highways England

The recent discovery of Ice Age mammoth and rhino remains near Cambridge became national news. The Sedgwick Museum has a new exhibit which tells the story of late Ice Age times and how the life and environments of the region were dramatically altered by climate change.

A 'once in a lifetime find'

For Darren Hickman, a 48-year-old excavator driver from Pontefract, West Yorkshire, it was a 'once in a lifetime find'. Whilst excavating gravel from a pit near Fenstanton, Darren recounts that he "...did a trial load into the base clay level and that's where I found the first mammoth tusk and the ice age bones."

Darren was working on the A14 improvement programme when his chance discovery soon became headline news across the country. Fortunately, these days there are systems in place for the onsite recovery of such finds, which can then be rapidly assessed for their scientific importance. In no time at all Highways England and the contractors MOLA Headland Infrastructure had archaeologist Dr Steve Sherlock and consultant Dr Bill Boismier on site. Bill Boismier is an 'Ice Age' specialist and has supplied details, which are missing from most of the media reports.



Remains of a woolly mammoth and woolly rhino

So far, the recovered bones have been identified as the heavy leg bones of mammoth and rhino along with a mammoth tusk and partial rhino skulls. These are typical of the large and heavy skeletal remains of the biggest of the ice age plant eating animals – the so-called megaherbivores of the time.

There is a suggestion that two different kinds of rhino may be present – the cold-adapted woolly rhino and a warm-adapted steppe rhino. The smaller bones of their skeletons, along with those of smaller animals, were destroyed by the rough and tumble of the huge meltwater rivers that coursed through the region.

It is not unusual for the remains of such animals, which lived in different ice age climates, to be jumbled together by river erosion of older sediments and then redeposited with relatively younger sediments. Researchers are currently trying to make exact identifications of the bones and searching the sediments for other clues as to their age.

Dating the remains

The bone bearing Fenstanton sands and gravels appear similar to those found in the nearby Woolpack Farm Quarry, which preserves a succession of sediments dating from the cold late Wolstonian glacial (over 130,000 years ago), the warm Ipswichian interglacial (younger than 130,000 years ago) along with much younger features produced between 27 and 16,000 years ago during the maximum cold of the last (Devensian) glaciation. However, it is also possible that all the sediments date from Devensian glacial times, which altogether lasted from 110,000-11,400 years ago. It is this important question that researchers are working on now.

Dating sediments is difficult but not impossible thanks to a relatively new and sophisticated technique called optically stimulated luminescence (OSL for short). It is also possible that some relative dates will be obtained from thin organic layers, which occasionally occur within the sands and gravels. Such organic layers are made up of plant remains such as seeds and pollen in varying states of decay. Many plants are sensitive environmental and climate indicators and luckily for the researchers can be identified, even from such remains.

To help with the detailed investigation, a section is going to be opened on one side of the 'borrow' pit from which the sediments are being excavated.

This will allow the investigating scientists to sample the different sediments which occur there in a measured way. They will be looking especially at the finer grained sands and organic muds, which were originally laid down in quiet water areas of the Ice Age rivers. Here, they can expect to find more plant remains, the shells of freshwater molluscs and insect remains, especially the tough wing cases of beetles, all of which are potentially usefull climate indicators.

The economic importance of sands and gravels

Huge amounts of sand and gravel are required in road building and other construction projects. In the UK some 15 million tonnes of sand and gravel are sold each year as part of a 7,000 million pound extractive industry. The nearer to the work site sands and gravels can be sourced the better. Cambridgeshire and East Anglia in general are rich sources of such materials.

They include the products of glacially eroded and transported rock material, which has been reworked by large powerful rivers that carried huge volumes of glacial meltwater across the region into the North Sea. Along with sediment, the rivers carried the remains of the extraordinary Ice Age bestiary.

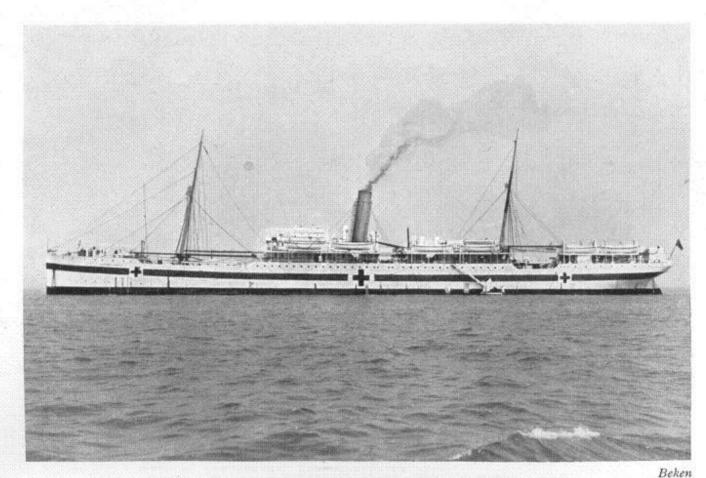
The Ice Age in the Sedgwick Museum

The Sedgwick Museum has a new exhibit, which tells the story of the latter part of the 'Ice Age' as experienced in the east of England. The exhibit uses the amazing animal and plants remains recovered from historic sites at Barrington, Barnwell and Burwell. The exhibit displays the extraordinary variety of animals that lived in the area. They ranged from warm climate hippos, rhinos, elephant, lion and hyena to cold adapted woolly mammoth and woolly rhino. They illustrate the dramatic impact that climate change had on life and environments during a typical interglacial-glacial-interglacial cycle.

It will be interesting to see how and where the Fenstanton finds fit in to the picture.

Douglas Palmer, Sedgwick Museum

Images © Highways England



H.M. HOSPITAL SHIP GLENART CASTLE. FORMERLY GALICIAN
Torpedoed and sunk, 1918

In Memoriam Dr Lewis Moysey R.A.M.C., F.G.S. 1869-1918

On the 26th of February, 1918 the hospital ship HMHS Glenart Castle left Newport, South Wales, heading for Brest in France. On board were 63 nurses, medical orderlies and officers, along with its crew and 99 wounded patients. One of the medical officers on board was the 49-year-old Captain Lewis Moysey RAMC, a graduate of Caius College and very keen amateur geologist who donated a substantial collection of Carboniferous fossils to the Sedgwick Museum.

The sinking of HMHS Glenart Castle

At 04.00 hours Glenart Castle was just 10 miles west of Lundy Island in the Bristol Channel. Despite being illuminated with the green lights of a hospital ship she was torpedoed by the German U-boat UC-56. The blast hit number 3 hold, destroying most of the lifeboats and the rapid listing of the ship made it difficult to launch the remainder. The vessel sank within some 8 minutes. There were only 32 survivors and Lewis Moysey was not amongst them.

Moysey – the doctor

Born in 1869, Lewis Moysey matriculated in 1887 at Gonville and Caius College and whilst an undergraduate medic in Cambridge enrolled in the Territorial Force. He graduated in 1895, was a house surgeon in London and Vienna before joining the British India Steam Navigation company in 1900 and getting married to the 31 year-old Frances Amelia Noble in 1901. By 1910 he was settled into a medical practice in Nottingham. But with his

Territorial experience he was mobilized at the outbreak of war in 1914 to serve in the Royal Army Medical Corps with regimental duties in Britain. Then in the final year of the war he was detailed to duties in the East and on February 26th set sail from Newport, South Wales on the first leg of the journey but tragically he never got beyond the Bristol Channel. Knowing that he was entering the active theatre of war, Moysey made over the entirety of his extensive fossil collections with the animal remains going to the Museum of Practical Geology in London and the plant fossils to the Sedgwick Museum in Cambridge.



Lepidostrobus moyseyi, a Carboniferous fossil cone ©Sedgwick Museum

Moysey the geologist

In 1908 Moysey had his first geological paper published in the Geological Magazine (Decade V, vol V, pp 220-2). In this he recounted his rediscovery of a method for splitting clay-ironstone nodules by freeze-thawing to reveal their fossil contents more effectively than by breaking them open with a hammer. In what spare time he had from his medical work Moysey used this technique to recover a significant number of rare, important and exceptionally well preserved Carboniferous arthropod and plant fossils from the Coal Measures of the Derbyshire and Nottinghamshire coalfield. The arthropods he passed on to the appropriate experts of the day – Henry Woodward, W.T. Calman and R.I. Pocock who incorporated them in their publications. And, the plants went to Edward Arber in Cambridge, who figured some of the best examples. No doubt it was a combination of Moysey's familiarity with the Sedgwick Museum from his student days and Arber's presence in Cambridge that prompted him to donate his collection of 367 Carboniferous fossil plants to the Sedgwick Museum.

However, Moysey was not just a collector of fossils but achieved sufficient expertise to write a series of academic articles between 1911 and 1913, whose worth was recognised by the Geological Society of London, who awarded him the Lyell Medal in 1915. Moysey's papers were mostly descriptions of some of his Carboniferous arthropod fossils but he also collaborated with W.C.B. Wedd and others on a general account of 'The geology of the northern part of the Derbyshire Coalfield and bordering tracts'.

Dr Lewis Moysey's premature death was not only a tragic loss for his family and friends but also for the wider geological community which greatly valued such generous and well informed amateurs.

Douglas Palmer, Sedgwick Museum

Images: HMHS Glenart Castle: http://www.histarmar.com.ar/ArchivoFotosGral-2/VaporesSACarrioin/126.JPG

191 years after being left in Scotland Adam Sedgwick's boots have been returned to Cambridge



In 1827, Adam Sedgwick, the 42-year-old Woodwardian Professor of Geology in the University of Cambridge and his geologically ambitious but less experienced companion, the 35-year-old Roderick Murchison, made a geological tour of Scotland. As their visit neared its end they called upon another young rising star of 19th century British geology, the 30 year-old Charles Lyell, who was visiting his family home - Kinnordy House in what was then Forfarshire.

When Sedgwick moved on from Kinnordy he left his hobnailed field boots behind. Now, in the bicentenary year of Sedgwick becoming Woodwardian professor, his boots have been returned to Cambridge by the Gifford family, descendants of the Lyell's, who still live at Kinnordy.

Such was Sedgwick's renown, that for much of the last 180 years or so the boots have had held pride of place on the piano in the main reception room at Kinnordy. A relative of the Gifford's remembers noticing the 'wee tackety' boots with their nailed soles on the piano in the 1970s. Although the piano has now gone, the boots, carefully labeled as 'Presented by Professor Sedgwick, Sept. 24th, 1827, Post diluvian?' were kept and have clearly been well looked after, as they are still in remarkably good condition.

We know that Sedgwick and Murchison visited Kinnordy in 1827 because the visit is mentioned in the 'Life and Letters of Sir Charles Lyell' (1881). Lyell subsequently became famous as the author of 'Principles of Geology' (1830-2), one of the most influential geology books of the 19th century. Sedgwick and Murchison (knighted in 1846 for his services to geology) later fell out in a big way. Demarcation of the geological boundary between Sedgwick's Cambrian and Murchison's Silurian systems of strata became one of the most notorious disputes of 19th century geology.

Douglas Palmer, Sedgwick Museum

Friends of the Sedgwick Museum BOOKING FORM

Date/Event
Contact details – please print
Name(s)
Email
Telephone
Address
Additional Information
Parking required?
Special diet?
Please enclose cheque for the appropriate amount made payable to 'The Friends of the Sedgwi Museum' and send to the person indicated on the programme.
Enclosed cheque for
Signed

Details will be emailed to you unless you indicate otherwise

The initial Deposit, made as an expression of interest, will be non-refundable if the event goes ahead. In the event of a later cancellation after further payments have been received, unless the place can be refilled an additional sum may be retained to cover the apportioned outlaid costs. Participants are therefore advised to arrange appropriate holiday insurance cover.

Please rest assured that your data will be used solely by the Committee and its Officers for the management of the Friends' activities and will not be passed to any third parties unless you have given permission for this to happen. Your consent to receive matter by email can be withdrawn at any time.



JOIN THE FRIENDS...

Membership is open to anyone!

Contact details

The Friends of the Sedgwick Museum **Downing Street** Cambridge, CB2 3EQ

> Department Reception: 01223 333400

Email: friendsofsedgwickmuseum@esc.cam.ac.uk

Key websites:

SEDGWICK MUSEUM

http://www.sedgwickmuseum.org/

DEPARTMENT OF EARTH SCIENCES BLOG

https://blog.esc.cam.ac.uk

CAMBRIDGESHIRE GEOLOGICAL SOCIETY

http://www.cambsgeology.org/

FACEBOOK - SEDGWICK MUSEUM

https://www.facebook.com/sedgwickmuseum

APPLICATION FORM

Please use block capitals and return the form, with your cheque, to the membership secretary.
Name (Dr, Mr, Mrs, Miss, Ms) (delete as applicable)
Address
Telephone
Email
Age (if under 18)
Subscriptions (please tick) ☐ Individual: £12 per annum (Over 18 years) ☐ Family: £18 per annum (Two or more members living a the same address) ☐ Young £6 per annum (Members under the person: age of 18) ☐ Concession: £8 per annum (Full time students, unemployed or over 60s)
Membership is for one year and expires on 31 st March. Members joining afte 31 st December will have the last quarter's membership included in the following year.
☐ I attach a cheque for £ made payable to The Friends of the Sedgwick Museum
SignedDate
Gift Aid Scheme. Because the Friends is a registered Charity (No. 1091393) we ca claim an additional amount on any subscription or donation, provided that you are a U tax payer. Your signature below will allow us to increase the value of each payment yo make for the benefit of the Friends.

Gift Aid Declaration. I am a UK tax payer. I would like the Friends of the Sedgwick Museum to treat all membership fees and donations as Gift aid donations from the date of this declaration until I notify otherwise.

Signed......Date......Date....

☐ Tick if you consent to the Friends contacting you by email to send you their Newsletter and keep you informed about their activities.

If you cease to be a member, in accordance with the Data Protection Act you may request us to erase all your contact information from our database by contacting friendsofsedgwickmuseum@esc.cam.ac.uk

Please rest assured that your data will be used solely by the Committee and its Officers for the management of the Friends' activities and will not be passed to any third parties unless you have given permission for this to happen. Your consent to receive matter by email can be withdrawn at any time.