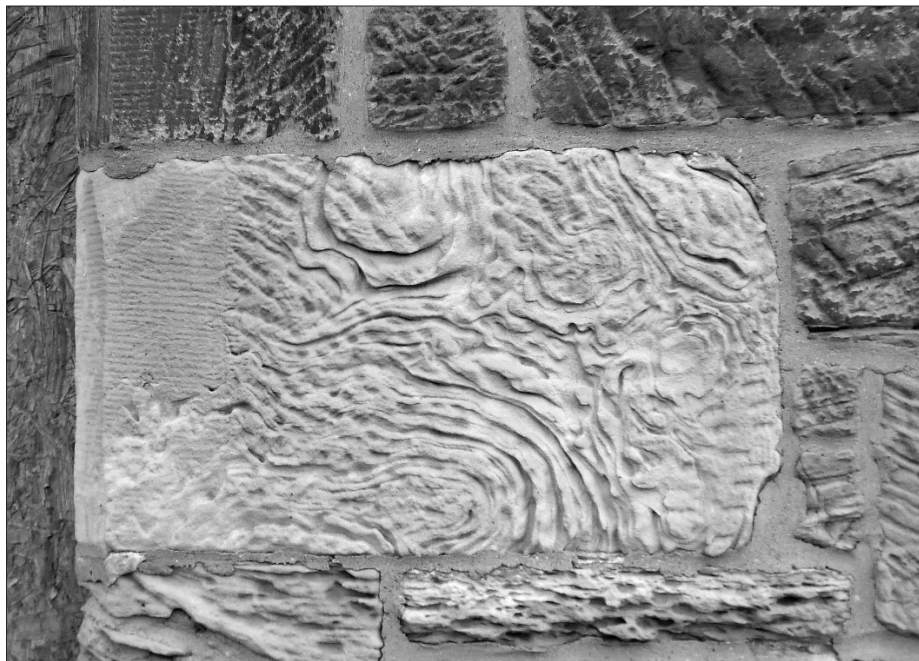




# EDINBURGH GEOLOGICAL SOCIETY

Promoting public interest in geology and the  
advancement of geological knowledge

## Annual Report and Proceedings 2017-18 184th Session



[www.edinburghgeolsoc.org](http://www.edinburghgeolsoc.org)

Charity registered in Scotland SC008011

# Edinburgh Geological Society

## Report of Council for the Year Ended 30th September 2018

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*Cover picture: Soft sediment deformation in a building stone from a wall adjacent to Lugton Bridge, Dalkeith. Andrew McMillan led the EGS Dalkeith Heritage walk excursion on Wednesday 6 June 2018 (photograph courtesy of Howard Turner).*

## Welcome

The Council of the Edinburgh Geological Society takes great pleasure in presenting the Annual Report and Accounts for the year ending 30th September 2018.

Robert Gatliff, President

### Council 2018 (Elected 7th February 2018)

President	Robert Gatliff
Vice-Presidents	Tom Challands Emrys Phillips Stuart Monro
Immediate Past President	Neil Mackenzie
Honorary Secretary	Don Cameron
Assistant Secretary (Annual Report)	Richard Buxton
Assistant Secretary (Minutes)	*Christian Ranken
Honorary Treasurer	Bruce Mair
Membership Secretary	Graham Leslie
Lectures Secretary	Ian Kearsley
Excursions Secretary	Andrew Rushworth
Assistant Secretary (Planning & Finance)	Alison Tymon
Assistant Secretary (Excursion Bookings)	Graham Leslie
Assistant Secretary (Clough/Awards)	David Stephenson
Assistant Secretary (Publications)	Mike Browne
Assistant Secretary (Geoconservation)	Don Cameron
Publication Sales Officer	Christine Thompson
Librarian & Archivist	Maarten Krabbendam
Scientific Editors	Tom Challands Barbara Clarke Con Gillen Chris Lofthouse Anastasia Polymeni
Ordinary Members	

\*Christian Ranken took a reduced workload through to Sept 2018, during which Andrew Rushworth covered certain aspects of the Treasurer's role.

Charity Name: Edinburgh Geological Society

Scottish Charity Number: SC008011

Official Contact Address: c/o British Geological Survey, The Lyell Centre,  
Research Avenue South, Edinburgh EH14 4AP

Website Address: [www.edinburghgeolsoc.org/](http://www.edinburghgeolsoc.org/)

## Report on Activities

### Overview

The Society continued to follow its Strategy for 2015-19 in pursuit of its objectives to stimulate and encourage public interest in geology and the advancement of geological knowledge. The programme of lectures was well attended, and there was a particularly successful programme of geological excursions. A number of new initiatives were taken forward, led by the Promotion Coordinator, including a well-attended public lecture evening on fossils and 6 geological (“Deep Time”) walks during the 2018 Edinburgh Science Festival. Promotion of the Society continues apace, as a result of which membership levels have risen to their highest number for many years. Our affiliated local geoconservation groups continued to be active, with the Lothian and Borders GeoConservation Group publishing a new geology walk leaflet (Hopetoun Foreshore) and a new booklet (Castle Rock), while others are in preparation.

### Council

The Council met four times during the year, and maintained an overview of the full range of activities of the Society. Angus Miller completed his two year contract as Promotion Secretary, a paid appointment which aims to raise the profile of the Society and boost membership, and a new contract was signed with him to act as Promotion Coordinator for a further twelve months. The Finance and Planning Committee continued to advise Council on the implementation of the EGS Strategy 2015-19, compiled and monitored a budget for the financial year 2017-18, and advised on applications for grants in support of the Society’s objectives. Other Committees of the Council were also active as summarised in this Report.

*The Edinburgh Geological Society was founded in 1834 and its objectives are the stimulation and encouragement of public interest in geology and the advancement of geological knowledge. Its governing document is The Laws of the Society which serve as its constitution. The Society is an unincorporated association with charitable status. Its membership elect the members of its Council as the Charity Trustees at the Annual General Meeting of the Society.*

*The Council is the management body for the Society and there are a number of Committees which manage particular aspects of the Society's work and report to the Council. These include the Finance and Planning, Clough, Excursions, and Publications Committees and also the Lothian and Borders Geoconservation Group, Tayside Geodiversity Group, and Stirling and Clackmannan RIGS Group. The Scottish Journal of Geology is owned jointly by the Society and the Geological Society of Glasgow. The Society is affiliated to the Geologists' Association.*

## Membership

The number of members rose by 48 (+8.8%) in 2017-18. The most significant increases were for Ordinary Fellows (+8.5%) and Senior Fellows (+13.0%). This positive trend follows that of 2016-17, and is seen as a result of continuing promotion of the Society, and utilisation of the improved website. There were 64 online versus 8 hardcopy applications, and furthermore fee payments by digital bank transfer rather than cheque have increased.

There were 8 resignations, 6 deaths and 2 suspensions of members during the year. Membership levels are now at their highest for more than 30 years.

	2017	2018	Change
Life Fellow	10	10	0
Ordinary Fellow	376	408	32
Family Fellow	27	28	1
Senior Fellow	92	104	12
Glasgow Associate	17	17	0
Junior Associate	7	10	3
Distinguished Fellow	7	8	1
Corresponding Fellow	6	6	0
Honorary Fellow	5	4	-1
<b>TOTAL MEMBERSHIP</b>	<b>547</b>	<b>595</b>	<b>48</b>

## Clough Medal and Research Grants

The Clough Medal was awarded this session to Professor Robert Holdsworth (University of Durham), in recognition of his exceptional research into the tectonic framework of the Moine rocks of Sutherland. He is a prolific author and editor, a frequent keynote speaker at international conferences, and he has an impressive record of teaching and supervision. No nominations were received for the biennial Clough Memorial Award in 2018 and nominations will be re-sought in 2019. No awards were made from the Clough or Mykura funds this year.

## Lectures Programme 2017-2018

The programme, organised by Lectures Secretary Graham Leslie, consisted of 10 meetings, and again they were enthusiastically received, with good attendances. An additional EGS Public Lecture was organised by Angus Miller at the University of Edinburgh's Appleton Tower on the subject of Scotland's recent fossil finds - it attracted a full-house audience. Fellows' Night and the social evening took place on 6 December 2017 at BGS Lyell Centre on the Heriot-Watt campus, with catering organised by Barbara Clarke. Lectures held during the session were:

- 2017** **Dr Phil Wilby** (BGS): Life just got complicated: the Ediacaran  
11 Oct fossils of Charnwood Forest
- 25 Oct **Dr Chris Duffin** (Retired): Richard Owen and fossil vertebrates
- 1 Nov **Dr Nick Fraser** (National Museums Scotland), **Dr Steve Brusatte** and **Dr Tom Challands** (both Edinburgh University): Public Lecture chaired by **Mark Stephen** (BBC Radio Scotland) - Scotland's recent fossil finds
- 8 Nov **Dr Aubrey Lee Zerkel** (University of St Andrews): Biological regulation of planetary atmospheres: insights from the early Earth
- 22 Nov **Prof Jenny Clack** (Cambridge University): Scotland: the world's greatest place for vertebrate palaeontology?
- 6 Dec **Fellows Night**
- 2018** **Asher Haynes** (Sirius Minerals): Sirius Minerals and polyhalite -  
10 Jan the future of fertilizer
- 24 Jan **Dr Jonathan Cloutier** (University of St Andrews): Joint MIS/EGS lecture - The use of short-wave infrared hyperspectral reflectance in mineral exploration
- 7 Feb **Hannah Watkins** (University of Aberdeen): Predicting strain and fracture patterns in a fold-thrust belt, NW Scotland
- 21 Feb **Prof Bob Holdsworth** (Durham University): Clough Medal lecture and Joint EGS/GGS lecture - Cracked and full of sand: insights into the development of fractured basement reservoirs west of Shetland
- 7 Mar **Prof Lorna Dawson** (James Hutton Institute): FSoil in criminal investigations and evaluation in current and cold cases
- 21 Mar **Dr Brian Baptie** (BGS): Is earthquake activity increasing?

## **Promotion of the Society and Public Interest in Geology**

Promotion of EGS was again coordinated this year by our paid Promotion Secretary, Angus Miller, and the Council's Promotion Steering Group. Successful and innovative activities engaging the general public and EGS members included an Earthcache weekend held in October (including a tour of Earthcaches in East Lothian and the Borders), a well-attended Public Lecture on Scotland's Recent Fossil Finds, and 6 Deep Time Walks in Holyrood Park as part of Edinburgh's Science Festival. In addition, the Society had a presence at six other events to promote Society membership and local geology, and organised three additional summer excursions aimed at new members and the general public.

The Society was approached this year by an Aberdeen-based company, Siccar Point Energy, who were keen to support promotion of Siccar Point as part of their corporate social responsibility. The company contributed over £5,000 to renew existing interpretation boards at Siccar Point, and reprint two Lothian and Borders GeoConservation leaflets on James Hutton and Siccar Point. EGS work has also continued with various partners to plan new interpretation boards at various locations across the Lothians and to prepare a poster and accompanying online educational materials for schools.

Angus Miller's contract was continued for another year from June, with the position being retitled "Promotion Coordinator", and now with a focus on building small working groups to take forward different aspects of promotional work including the EGS website and events. Under this contract, Angus will also continue to lead a variety of special initiatives for the Society.

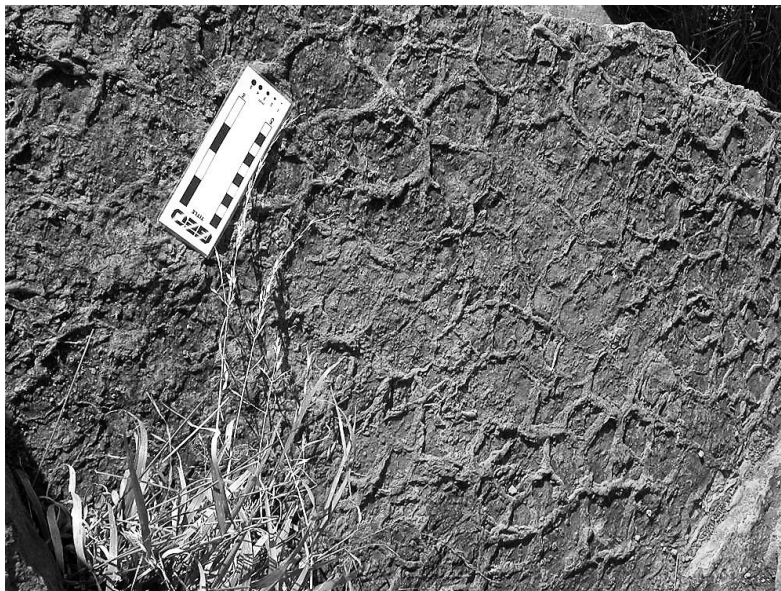
## **Excursions Programme 2017-18**

The ambitious programme for 2018 was organised by Ian Kearsley, with assistance from Angus Miller. It included 9 Saturday or Sunday, 6 Wednesday evening, and Long (week) and Long Weekend excursions. Bookings for all excursions were taken by Alison Tymon. The programme also included 2 introductory excursions specifically aimed at new EGS members. The Society does not pay a fee to leaders or co-ordinators, and is very appreciative of the time and expertise that they give so willingly. Most of the 19 excursions were full to capacity, with an average of 20 participants. In total, 142 EGS members enjoyed the excursions, with many attending several outings, and visitors from other geological organisations were also made welcome.

The excursions were:

Sun 1 Oct (2017)	Buildings and building stones of Dalkeith: Leader Andrew McMillan
6,7,8 Oct (2017)	Geocache Weekend (part of Scotland's Geoheritage Festival)
Wed 25 Apr	Ellen's Glen: Leader Al McGowan
Wed 9 May	Bonaly: Leader Andrew McMillan
Wed 23 May	Currie - Balerno: Leader Ken Shaw
Sun 27 May	Arthur's Seat: Leaders Angus Miller and EGS Council members (introductory excursion)
Sat 2 Jun	Ardross - St Monans: Leader Rosalind Garton
Wed 6 Jun	Dalkeith Heritage walk: Leader Andrew McMillan
Sat 16 Jun	Coldingham: Leader Emrys Phillips
Sun 17 Jun	Berwick: Leader Alison Tymon
Wed 20 Jun	Calton Hill: Leader Richard Smith
Wed 27 Jun	Aberlady shore: Leader David McAdam
Sat 30 Jun	Perth area: Leader Con Gillen
Sat 14 Jul	Duns: Leaders David Stephenson and Alison Tymon
Sat 28 Jul	Eddleston Water and Talla catchments of the River Tweed: Leader Clive Auton
Sun 5 Aug	Vogrie - Crichton: Leaders Angus Miller and Howard Turner (incorporated in Midlothian Science Festival)
Sat 18 Aug	Dunbar to Belhaven: Leader Fiona McGibbon
Sat 1 Sep	Tantallon: Leaders Tom Challands and David Millward
Sat 8 Sept	Siccar Point: Leaders Angus Miller and EGS Council members (introductory excursion)
Involvement by the Society in other organised events included:	
5, 6, 7 Apr	Edinburgh International Science Festival - Deep Time walks
Sat 18 Aug	St Abbs Science Festival





*Desiccation cracks on the surface of a Lower Carboniferous mudstone at Arthur's Seat. One of this year's two excursions organised for new EGS members visited Arthur's Seat on 27 May 2018 (photograph courtesy of Alison Tymon).*

The **EGS Long Excursion 2018** took place in Cornwall from 19-26 May - it was led by Professor Peter Scott (Camborne School of Mines & Exeter University), and Dr Mike Styles (British Geological Survey). The aim for the excursion was to study the geology of the Lizard Peninsula and neighbouring localities. Broadly, the geology of southern Cornwall comprises predominantly Devonian mudstones deformed and overthrust from the south during the Variscan Orogeny by the spectacular ophiolites exposed on the Lizard. Subsequently, the central Cornubian granite batholith intruded the mudstones and produced an extensive metamorphic aureole characterised by extensive mineralisation. The excursion began at the Carn Brea viewpoint with its unusual scalloped granite tors - the viewpoint overlooks Camborne, numerous mines and much of the Cornish coast. Then followed a visit to Botallack with its highly photogenic cliff-side mine engine-houses, where the group was introduced to the characteristic mineralisation within the metamorphic aureole surrounding the granite. In warm sunshine in the course of the week that followed, the group was treated to a veritable feast of spectacular and varied geology. At the Lizard Peninsula ophiolite, the group were able to walk 'across the Moho' from mantle to lower crustal rocks. Other stops enabled investigation of mine workings and dumps, a

wide range of metamorphic rocks including numerous outcrops of the characteristic serpentinite (which has been widely exploited for tourist souvenirs), and a visit to a disused china clay pit which provided evidence of the changing economy of the region. Thanks are due to Prof Scott and Dr Styles for a fantastic and memorable excursion and most importantly, as ever, to Anne Burgess for expertly organising the excursion.

The **Long Weekend 2018** excursion to the Lochaber Geopark took place from 14-17 September - it was organised by Ian Kearsley and led by Jim Blair (Lochaber). Initially accompanied by bright sunshine, but latterly by wind and rain, Jim's richly varied itinerary encompassed everything from Moinian Loch Eil Division and Dalradian Appin Group metasedimentary rocks and structures through Lower Old Red Sandstone conglomerates adjacent to the Great Glen Fault to Lower Cretaceous at Loch Aline Quartz Sand mine. The party also visited the former Ballachulish slate quarry and several of the Strontian lead and barite mine workings, and enjoyed the somewhat surreal experience of collecting Gryphaea fossils (from a nearby Pabay Shales outcrop) mixed amongst bivalves and gastropods in modern Loch Aline beach sediments.

## Publications

The Scottish Journal of Geology (SJG, produced jointly with the Glasgow Geological Society) has seen some very positive trends this session. Volume 54 parts 1 and 2 were published in 2018, and comprised five articles and six articles respectively. There has been a marked increase in the number of submissions, but concomitant with this rise has been a considerably higher rejection rate, a trend that has been on the increase since 2014. Nevertheless, two more articles were accepted for publication than in the previous year. Alongside this modest increase, there has also been a reduction from 8.6 months to 5.5 months for the mean lead time from submission to publication.

Authors are now considering the accessibility of their work more than ever, and 2018 saw the first gold open access article for SJG. Gold open access allows anyone to access the article from the publisher rather than green open access where the author makes their work accessible through self-archiving a copy of their article, typically at the proof stage. This is a positive trend increasing the exposure of SJG to those who are non-members and from any background. We expect to see all of these positive trends continuing into 2018-19 as we publish our special issue for early-career researchers, and also introduce a submission from the recipient of the Clough Medal.

Two editions of The Edinburgh Geologist were published, under the editorship of Phil Stone and Bob McIntosh. Three full-colour editions

(Autumn-Spring-Autumn) of the EGS Newsletter were produced by our Promotions Secretary, Angus Miller. These were distributed to members as hard copy, but are also available online, via the Society's web site. In addition to keeping members informed about the Society's activities, the Newsletter is proving useful in promoting the Society to a wider readership of non-members. The GeoConservation Groups continued to produce leaflets, as described below; a full list can be found on our website <https://www.edinburghgeolsoc.org/publications/geoconservation-leaflets/>.

Revenue obtained in 2017/18 from book sales through the EGS website, at EGS lectures and at public events decreased this year from £4,150 to £3,086. On the face of it this might seem disappointing, but a spate of large bookshop orders late in the session has led to an unusually large carry-over of £1,023 of unpaid invoices into 2018/19 - these were all settled in late 2018. The EGS share of additional revenue for the 4 books published jointly with the National Museums Scotland (NMS) and the Glasgow Society of Geology (GSG, for the Moine excursion guide only) increased in 2017/18 by 16% to £723.

Stocks of the excursion guide to the Moine geology of the Northern Highlands of Scotland became fully depleted in July 2017. After research into the viability of alternative publication methods, Council endorsed a decision to participate jointly with NMS and GSG in a 500-copy reprint. Stocks of 2 further books became fully depleted this session - these were the geological excursion guides to Islay and to the Dalradian Rocks of the South-West Highlands. Stocks of the newly published Berwickshire Coast Rocks were made available for purchase in July.

The entire stock of EGS excursion guides and geoconservation leaflets remains housed in secure rental storage in Leith. Storage is currently costing the Society approximately £1,200 per year and the search continues for an alternative.

### **Geoconservation Groups** (report by Mike Browne, chair)

The Lothian and Borders GeoConservation (Business) Committee met twice this session, and continued its work on the monitoring and designation of Local Geodiversity Sites. Also held were one meeting each of the Edinburgh and West Lothian council's geodiversity working groups. The Volunteer Group met monthly during the winter. The geology walk leaflet on Hopetoun Foreshore and booklet on Castle Rock were completed and published with funding from EGS, with the former also partly funded by a private donation. These are also available for download from the EGS website. The Hopetoun Foreshore leaflet, prepared initially by Tom Fitzpatrick in 2017, formed part of our continuing involvement in Edinburgh University's School of Geosciences Outreach projects.

Volunteers led by Andrew McMillan continued to work on materials for a booklet on Dalkeith's built and geological heritage. Out of print James Hutton and Siccar Point leaflets have been re-issued after minor revisions, the printings being funded by Siccar Point Energy. Work this year was also undertaken in support of Rob Grierson, one of this year's university outreach students, to develop a leaflet for the Bathgate Hills. This will be designed and laid out by West Lothian Council.

Members of the group led EGS evening excursions to Ellen's Glen, Bonaly, Dalkeith, Calton Hill and Aberlady Shore. Former members of the quiescent Tayside Geodiversity Group led geology walks as part of the Angus Coastal Festival in September (7<sup>th</sup> - 17<sup>th</sup>) to Auchmithie Geodiversity Trail, Monifieth Coastal Geology Walk, and the Montrose Coastal Geology Walk. The Volunteer Group helped organise a fossil event at Loanhead Library as part of the Midlothian Science Festival, and attended an Earth Day celebration at Dynamic Earth in April 2018 and the BGS Doors Open Day event in September at The Lyell Centre, Heriot Watt. Our 27 published leaflets were again distributed to favourable comment.



*Neil Mackenzie and Robert Gatliff (EGS) with Doug Fleming (Siccar Point Energy Ltd, SPEL) at the new Siccar Point geological interpretation board (funded by SPEL and who also provide the image above). One of this year's two excursions organised for new EGS members visited Siccar Point on 8 September 2018*

## Acknowledgements

The affairs of the Society are organised predominantly by voluntary effort, assisted by one paid part-time independent contractor (Angus Miller). Members of Council jointly contribute hundreds of hours of time to the running of the Society, much of this in quiet ways behind the scenes. Council is supported by many other people, including lecturers, excursion leaders and organisers.

## Grants and awards

The EGS Grant Scheme supports projects which further the aims of the Society, namely to encourage public interest in geology and to advance geological knowledge. Council received a number of applications during the year and the following were approved, to a total of £3,295. In addition, a £100 Science Prize was awarded to Laura Gellatly.

Dr James Darling, University of Portsmouth	£420	Studies of the early evolution of the Earth's crust
St Andrews University Geobus	£500	Geology Field Camp for 25 school pupils aged 16 to 19
Northwest Highlands Geopark	£375	Towards cost of NWHG 2018 Geoheritage Festival
Stacy Phillips, Open University	£500	Development of Educational Resources on the Geoheritage of Northwest Scotland
Lothian and Borders Geoconservation Group	£1,000	Geological Booklet "Around Castle Rock"
Scottish Geodiversity Forum	£500	Launch and printing costs for Scottish Geodiversity Charter

## **Financial Review**

The Society incurred a deficit in 2017-18 of £1,520, having budgeted for a deficit of £3,333 in line with Council's policy of funding the cost of the Promotion Coordinator's contract from Reserves. The reduced deficit was due mainly to increased subscription receipts and to lower than expected expenditure on excursions and on grants, events and initiatives, plus gift aid claims for 2 years. The deficit on receipts and payments was more than offset by gains in the value of the Society's investments, so that total Reserves increased from £132,084 to £133,394.

The Council's policy is that it should maintain a minimum level of Unrestricted Reserves of £35,000 to guard against financial risks. The current level of Unrestricted Reserves comfortably exceeds that at £93,084. Indeed Council has determined that it can readily continue to fund the Promotion Coordinator costs from its Reserves for the time being. Other initiatives may be similarly funded although the Council's overall Strategy requires it to keep the level of its Reserves under regular review.

Within the total funds of £133,394 are two Restricted Funds, the Clough and Mykura Funds which are described in note 6 to the accounts. These Funds make up the remaining £40,310 of the Reserves, having increased by £1,717 during the year.

The Council is guided by its Strategic Plan for EGS 2015-19 and by an annual budgeting process under which it allocates and controls expenditure. Its investments are managed by Speirs and Jeffrey Ltd, and the Council have taken advice from Anderson Strathern LLP in the preparation of these accounts.

**Approved by the Council of the Edinburgh Geological Society  
and signed on its behalf by:**

Robert Gatliff, President  
20 March 2019

**Statement of Financial Activities including Receipts and Payment  
Account for the year ended 30th September 2018**

	Note	Unrestricted £ 2018	Restricted £ 2018	Total £ 2018	Total £ 2017
<b><u>Receipts</u></b>					
<b>Voluntary Income</b>					
Members' subscriptions		10,188	0	10,188	9,065
Gift aid		2,622	0	2,622	0
Donations		350	0	350	3,285
<b>Investment Income</b>		2,182	1,009	3,191	2,933
<b>Income from Charitable Activities</b>					
Excursions	3	13,599	0	13,599	13,138
Grants and Awards		1,250	0	1,250	0
<b>Fundraising trading</b>					
Sales of Publications		3,875	0	3,875	5,460
<b>Total Incoming Resources</b>		<b>34,066</b>	<b>1,009</b>	<b>35,075</b>	<b>33,881</b>
<b><u>Payments</u></b>					
Investment management costs		564	0	564	360
Storage		1,188	0	1,188	1,188
<b>Fundraising trading:</b>					
Cost of sales		3,520	0	3,520	4,749
<b>Charitable activities:</b>					
Lectures		1,512	0	1,512	2,308
Newsletters		2,312	0	2,312	1,798
Edinburgh Geologist		1,985	0	1,985	2,011
Excursions	3	13,325	0	13,325	13,470
Events/Initiatives (net)		43	0	43	0
Grants and awards		3,695	0	3,695	6,899
Promotion		4,038	0	4,038	4,194
Sponsored projects		0	0	0	384
Administration and Governance		0	0	0	4,694
Administration		1,233	0	1,233	0
Governance		2,592	0	2,592	0
<b>Total resources expended</b>		<b>36,007</b>	<b>0</b>	<b>36,007</b>	<b>42,055</b>

*Continued overleaf*

<b>Net incoming/(outgoing) resources before investment sales and (purchases)</b>	<b>(1,941)</b>	<b>1,009</b>	<b>(932)</b>	<b>(8,174)</b>
Proceeds from sale of investments	1,073	496	1,568	5,437
Purchase of investments	(1,475)	(682)	(2,156)	(5,239)
	<b>(402)</b>	<b>(186)</b>	<b>(588)</b>	<b>(197)</b>
<b>Surplus/(deficit) for year</b>	<b>(2,344)</b>	<b>823</b>	<b>(1,520)</b>	<b>(7,977)</b>

#### Statement of Balances as at 30th September 2018

	2018 £	2017 £
<b>Cash Funds</b>		
Cash and bank balances at start of year	25,006	32,983
(Deficit)/surplus shown on receipts & payments account	(1,520)	(7,977)
<b>Cash and bank balances at end of year</b>	<b>23,486</b>	<b>25,006</b>
<b>Stock</b>		
Stock of publications	1,906	1,714
Other stock	567	709
	<b>2,473</b>	<b>2,423</b>
<b>Investments - Analysis of Movements of Investments</b>		
Market value at beginning of year	101,581	
Add: additions to Investments at cost	2,156	
Less: disposals at market value	(1,440)	
Add: net gain on revaluation	2,114	
	<b>104,411</b>	

The notes on pages 17-18 form part of these accounts.

Approved by Council and signed on its behalf by

C Ranken, Treasurer 20 March 2019



## Notes forming part of the Financial Statements

### 1) Accounting Policies

The size of the Society is such that the trustees moved the preparation of the accounts from an accruals basis to a receipts and payments basis, as reflected in the 183<sup>rd</sup> Session Annual Report and Proceedings, as this was felt to be more appropriate. This was to reduce cost and make the preparation of the accounts much simpler.

### 2) Geoconservation Groups

Lothian and Borders GeoConservation and Tayside Geodiversity groups are constituted as committees of the Society, but have their own office-bearers and bank accounts. Their financial results are included in these accounts.

### 3) Excursions

Particulars of the Society's excursions etc are as follows:-

	2017/18		2016/17	
	Contributions £	Cost £	Contributions £	Cost £
Day Excursions	1,301	2,186	808	1,728
Weekend Excursions	280	280	0	78
Long Excursions	11,809	10,723	12,165	11,528
Fellows' Night	211	136	165	136
<b>TOTAL</b>	<b>13,599</b>	<b>13,325</b>	<b>13,138</b>	<b>13,470</b>

### 4) Publications

Stocks of publications have been valued at the lower of cost and net realisable value after making due allowance for obsolete and slow-moving items.

### 5) Trustee Remuneration and related party transactions

No members of Council received any remuneration during the year. Costs incurred in entertaining lecturers after the public lectures (£512) were refunded to 4 members of Council, and other costs totalling £463 incurred on behalf of the Society were refunded to 3 members of Council.

No trustee had any personal interest in any contract or transaction entered into by the charity during the year. One member of the Society entered into a contract for services to provide promotion activity to the Society.

## 6. Funds

### Endowment Funds

The purpose of the Clough Memorial Fund is to provide a medal annually to a geologist whose original work has materially increased the knowledge of the geology of Scotland and the North of England, and to award grants for fieldwork. The Mykura Fund supports fieldwork in Scotland. No grants were awarded from either fund during the year. The £300 Clough Memorial Award made to Hannah Watkins in 2016/17 was debited during the current session.

### Accounting

The gross income from investments and bank interest received during the year, together with net gains (losses) on disposal or revaluation of investments, has been apportioned to the various Endowment funds in the ratio of their opening balances.

The assets of the Society have been apportioned to the various Endowment funds in the ratio of their closing balances.

	Unrestricted Funds £	Endowment Funds £		Total £
		Clough	Mykura	
Investment income	2,182	505	504	3,191
Grants and Awards	1,250	0	0	1,250
Other Incoming resources	30,634	0	0	30,634
<b>Total incoming resources</b>	<b>34,066</b>	<b>505</b>	<b>504</b>	<b>35,075</b>
Grants and awards	3,695	0	0	3,695
Sponsored projects	0	0	0	0
Other outgoing resources	32,312	0	0	32,312
<b>Total outgoing resources</b>	<b>36,007</b>	<b>0</b>	<b>0</b>	<b>36,007</b>
Gains on Investments	1,534	354	354	2,242
Net movement in funds	(407)	859	858	1,310
Funds brought forward	93,491	20,011	18,582	132,084
<b>Funds carried forward</b>	<b>93,084</b>	<b>20,870</b>	<b>19,440</b>	<b>133,394</b>
Represented by:				
Investments	71,412	16,523	16,476	104,411
Current assets	21,672	4,347	2,964	28,983
	<b>93,084</b>	<b>20,870</b>	<b>19,440</b>	<b>133,394</b>

**Independent Examiner's Report to the Trustees of the  
Edinburgh Geological Society**

**For the year to 30th September 2018**

I report on the Accounts of the Charity for the year ended 30th September 2018 which are set out on pages 14 to 18.

**Respective responsibilities of trustees and examiner**

The charity's trustees are responsible for the preparation of the accounts in accordance with the terms of the Charities and Trustee Investment (Scotland) Act 2005 and the Charities Accounts (Scotland) Regulations 2006 (as amended). The charity's trustees consider that the audit requirement of Regulation 10(1)(a) to (c) of the 2006 Accounts Regulations does not apply. It is my responsibility to examine the accounts as required under section 44(1)(c) of the Act and to state whether particular matters have come to my attention.

**Basis of independent examiner's statement**

In the course of my examination, no matter has come to my attention:

- 1) which gives me reasonable cause to believe that, in any material respect, the requirements:  
to keep accounting records in accordance with Section 44(1)(a) of the 2005 Act and Regulation 8 of the 2006 Accounts Regulations  
and to prepare accounts which accord with the accounting records and comply with Regulation 8 of the 2006 Accounts Regulations  
have not been met, or
- 2) to which, in my opinion, attention should be drawn in order to draw a proper understanding of the accounts to be reached.

Jessie W Craig MA, CA  
33 Braehead Avenue  
Edinburgh  
EH4 6QN

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2019

## Obituaries

During the year we recorded with the greatest regret the deaths of Mrs Rita Cameron, Dr Henry Emeleus, Mrs Thelma Nicholson, Mr William Simpson and Prof Nigel Trewin, and from the previous year (but omitted from our 2016/17 Annual Report) Mr Owen Bayliss Silver.

**Rita Cameron:** Barbara Clarke writes - After a background in teaching biological sciences, Rita settled in Edinburgh post-retirement, where she joined the University of the Third Age (U3A) and helped to set up and run its Science Group. She was a keen hill walker with an interest in rocks. A chance meeting with Angus Miller led to her enrolling him to lead a U3A Science Group geology trip to Eigg in 2006. Several successful geology excursions followed to Iona, Mull and Skye, to Shetland, and Arran until in 2011 it seemed obvious that interest in geology was strong enough to start a separate Geology Group within the U3A. Thanks to Rita's initiative, together with the considerable support and encouragement given to this new group by EGS Council and many EGS members, U3A Geology has subsequently gone from strength to strength. Rita was an EGS member from 2011, and she passed away in May 2018.

**Charles Henry Emeleus:** Brian Upton writes - Henry was born in 1930 into a family with strong scientific leanings and of Finnish heritage in Lisburn, Co. Antrim, Northern Ireland. After attending schools in Lisburn and Belfast, Henry graduated with first-class honours in geology from Queen's University, Belfast. There he learned igneous petrology from Jack Preston and at the suggestion of fellow Ulsterman James E. Richey, he mapped the Western Mourne for his 1953 MSc thesis. Next he completed an Oxford DPhil on the Slieve Gullion ring-complex under the supervision of Professor Lawrence (Bill) Wager.

With these three mentors it was hardly surprising that Henry acquired a fascination with the Palaeogene volcanic centres of Scotland and Ireland that was to remain with him through the rest of his life. Early at Oxford he met Charles Hughes, whose DPhil project was 'the Southern Mountain complex of Rum'. A single season in the field with Hughes was enough to fill Henry with a passion to comprehend the evolution of the extraordinary Rum volcano. Although his Slieve Gullion work was successfully completed in 1957, Henry had already been filled with an unquenchable passion for the Hebridean centres in general that was terminated only by death. Having taken me around the Antrim coast, Slieve Gullion and the Mourne, I too not only caught his enthusiasm but became his life-long disciple!

When, in 1955, I was taken on by Wager to work on an unmapped syenite pluton (Kûngnât Field) in southern Greenland, I was immensely relieved that

Henry was selected to accompany me, ostensibly as my field-assistant but, in reality, my teacher and inspiration. At that time, Greenland was still very primitive and field-work was largely geological exploration. Henry and I returned in 1956 and 1957 to also start reconnaissance work on a nearby nepheline-syenite/carbonatite pluton. Henry's initial work on this highly faulted area so impressed the Greenland Geological Survey (GGU) that he was contracted to complete the mapping.

Henry continued work for GGU in the following years, including a commission to map the Igaliko syenite centres, a geologically little-known region covering some 450 km<sup>2</sup>, with mountains rising from the fjords to over 1700 m. Fieldwork had to be conducted over a high rugged terrain broken by fjords, glaciers and glacial rivers. This, in partnership with Bill Harry, took several summers in the early 1960s. It was a truly heroic undertaking for which a medal from the GGU would not have come amiss! Back in Durham he was appointed to a lectureship at Durham University in 1957 and promoted to Senior Lecturer in 1969 and a Readership in 1979. In 1965 he married Ruth Tyler, then a geochemist at King's College London, and she accompanied him to Greenland in summer 1966.

Further GGU commissions followed. In 1976 he and I were engaged to map the Hold with Hope peninsula north of Scoresby Sund, starting in snows in June and ending in the snows of September with spring, summer and autumn squeezed in between. We had many excitements; watching for musk oxen, polar bears and with problems presented by swollen rivers and by impenetrable sea-fogs. We mapped plateau basalts over Mesozoic sedimentary rocks, dyke- and sill-swarms and the two northernmost of all the Palaeogene central volcano-complexes. Had, instead, we been on Mull 12,000 years ago it would have appeared very much like Hold with Hope! That expedition was the culmination to his more than fifteen seasons in Greenland and ended our joint field-work in that wonderful play-land.

Henry was a quiet man, blessed by great physical resilience that made him virtually inexhaustible in the field. No doubt benefitting from early tuition by James Richey, he was a highly skilled field-man; every boundary, fault, dip and strike required repeated verification before becoming finalised on his map. He knew almost every British/Irish Palaeogene igneous outcrop (except St Kilda which he never reached). It was the Rum volcano, however, to which he became devoted. At Oxford he benefitted from the company of Malcolm Brown while the latter completed his classic work on the cumulates of the Rum Eastern Layered Series, all under the eye of Bill Wager. It is not surprising with this background that Henry devoted as much time as he could in the next sixty years to unravelling the intricate history of Rum, whose rocks he came to know more intimately than is ever likely to be

exceeded. An important overall synthesis of the evolution of the Rum volcano from ‘birth to death’ (with Valentín Troll and others) was in an advanced state for submission to the *Journal of Petrology* and it is sad that Henry did not live to see it published.

When the first lunar landing took place in July 1969, Henry (together with David Stephenson and me) were listening to it on a crackly radio on a GGU boat off the coast of Greenland. It was apposite that the Durham University Geology Department, being one of the first in Britain to have an electron microprobe facility, was chosen to investigate the samples from the 1969-1972 Apollo programme. This work was led by Malcolm Brown, with Henry doing most of the mineral analyses. Henry was brought up in predigital days but was highly adept with the petrological polarising microscope and skilled in the use of the universal stage and refractive-index oils. Although the electron microprobe and XRF analysis were in their infancy in the 1960s and 1970s he adapted fast to the new techniques. As a teacher his patience and broad knowledge were highly appreciated by his students. He had some twenty PhD students, over half of whom had projects in south Greenland, four others in the Hebrides and the rest in various areas including Norway, and Iceland.

Most of Henry’s scientific papers concern the Palaeogene Hebridean Province and he was an obvious choice of author to write about it for books such as Diana Sutherland’s “Igneous Rocks of the British Isles” and two successive volumes (1983 and 1991) of “The Geology of Scotland”. His enthusiastic collaboration with younger researchers continued to the last, especially with Valentín Troll with whom he published our Society’s “A Geological Excursion Guide to Rum” (2008) and a major review of “The Rum Igneous Centre” in the *Mineralogical Magazine* (2014). In 1980 he compiled a 1:20,000 map of Rum for Scottish Natural Heritage but his most widely appreciated legacy will be his maps and descriptions of the Hebridean Igneous Province, produced under contract to the British Geological Survey. Most notable are his 1:50,000 maps of Rum (1994), and of North Mull and Ardnamurchan (2013), the 1:25,000 map of the Ardnamurchan Central Complex (2009), The Rum and Adjacent Islands memoir (1997) together with (in partnership with Brian Bell) the Palaeogene Volcanic Districts of Scotland in the British Regional Geology Series. The importance of his publications on the world-famous Hebridean Province, coming out at regular intervals over sixty-four years, cannot be overstated.

Numerous memoirs, reviews and scientific papers resulted from Henry’s work in Greenland. His name is credited on seven published GGU map sheets. Henry was also a co-author of a guide-book to the southern part of the Gardar Province (2007) to open the region to ‘geological tourism’.

Henry was an active member of many societies and had been a member of the Mineralogical Society since 1957, on which he served a vice-president in 1977-1979. He was the recipient of many honours starting with the award of the Daniel Pidgeon Fund of the Geological Society of London in 1958 followed by a moiety of the Lyell Fund in 1973. In 1978 I had the pleasure of naming a new mineral, emeleusite, (a per-sodic lithium cyclosilicate) from a pantelleritic dyke in the Gardar Province, in his honour. He was an honorary fellow of the Edinburgh Geological Society and was awarded the Clough Medal in 2014. Surprisingly, despite his prominence as researcher and teacher, he was not given a professorship until after his retirement when the title Professor Emeritus was conferred in 2016. However, his long and distinguished contribution was recognised when Durham University awarded him their Chancellor's Medal in 2014. His name would undoubtedly be more widely known throughout the geological community had he not been such an unassuming and retiring individual. He was a guide and inspiration to his many students, colleagues and friends who will miss his dedication, integrity and dry humour. At home he was devoted to his family and justifiably proud of his vegetable garden. The hobby from which he derived much pleasure was railways, both in reality and as models. His pride and joy, however, was an 0-gauge railway in his attic. He was a true gentleman and I hope that these tributes bring some comfort to his widow, Ruth, and to his children, John, Katherine and Lucy and his two grand-daughters. Henry died in Durham, after an illness, in November 2017.

In writing Henry's obituary, Brian is much indebted to David Stephenson's obituary, published by the Mineralogical Magazine and available on the EGS website.

**Thelma Nicholson** of Edinburgh was an EGS member from 1978 until she passed away aged 88 in February 2018.

**Owen Bayliss Silver** of St Andrews was an EGS member from 1995 until he passed away aged 91 in March 2017.

**William Simpson** of Kelso was an EGS member from 2003 until he passed away in March 2018.

**Nigel H Trewin:** Born on the Isle of Wight in Cowes in 1944. Nigel developed an early interest in geology, and collected fossils from the age of 10. He obtained a first class honours degree in geology from Bristol University, and a PhD from Keele University based on his research into the Namurian geology of North Staffordshire. Newly married to Margie, Nigel took up a post as lecturer in geology at Aberdeen University in 1968, where he was nicknamed "Nodule Trewin" after finding numerous septarian nodules on a field trip to the Jurassic of Skye. For his outstanding contributions to

research and teaching there during a 36-year career, he was awarded a personal chair in 2004. Nigel thoroughly enjoyed teaching, and was widely regarded as a wonderful communicator.

Nigel's research interest was dominated by the Devonian Period (*ca.* 400 Ma ago), and especially its plants, animals and environment. He spent many happy hours in quarries around Scotland looking for fossil fish of this period, and he donated his collection to the National Museums Scotland. With his colleague Clive Rice, he investigated the famous Devonian hot-spring system near the village of Rhynie for more than 15 years. On one occasion, after opening a large trench to explain the geology to local residents, Press and Journal journalists arrived to report on the hot spring. Nigel patiently explained with a smile and his usual wit that they were 400 Ma too late.

Nigel published over 100 scientific papers on Scottish geology relating to Old Red Sandstone fish beds, sedimentology and palaeoecology. He edited the most recent 4<sup>th</sup> edition of the *Geology of Scotland*, and popular excursion guides to the Aberdeen area, and to East Sutherland and Caithness. Nigel was awarded the Clough Medal in 2005 by the Edinburgh Geological Society for his work on Scottish geology and in 2009 the T.N. George Medal of the Glasgow Geological Society for excellence in palaeontology. He was a founder member of the Aberdeen Geological Society and President thereof for many years. He led many field trips and fossil forays for Aberdeen and other geological societies, museums, Rotary clubs, schools, and for groups of oil industry geologists investigating analogues of North Sea oil reservoirs. He was a trustee and former chair of 'The Friends of Hugh Miller', and donated his collection of related ephemera, books and letters to the Hugh Miller Museum in Cromarty.

Amongst Nigels's many extracurricular activities, he was a keen angler, and proud of his record of catching almost as many salmon as his contributions to academic journals. Although his favourite tippie was cider, he also enjoyed a malt whisky and came up with an ingenious way of combining this with popularising geology. He wrote a lecture on the *Geology of Scotch Whisky*, which mentioned many brands in the context of the local geology and which naturally included his favourites. He delivered the lecture to many venues throughout Scotland and was well rewarded for his efforts by the whisky producers. Nigel died in October 2017.

(This account was based on the eulogy given by Clive Rice at Nigel's funeral).