### CONTENTS

**THIRTY-SIXTH ANNIVERSARY MEETING, THURSDAY, 4TH NOVEMBER 1869.**

<table>
<thead>
<tr>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Opening Address by the President, ARCHIBALD GEIKIE, Esq., F.R.S., F.G.S.,</td>
</tr>
<tr>
<td>II. Presentation to Society of Bust of late Mr CHARLES MACLAREN, F.R.S.E., F.G.S., formerly President of the Society,</td>
</tr>
<tr>
<td>III. Election of Office-Bearers for Session 1869-70,</td>
</tr>
<tr>
<td>IV. Treasurer’s Statement for past year,</td>
</tr>
</tbody>
</table>

**THURSDAY, 18TH NOVEMBER 1869.**

Notes on *Poterioceras pyriforme*, from the Carboniferous Limestone of Lanarkshire. By GEORGE LYON, 15

**THURSDAY, 2D DECEMBER 1869.**

I. Observations on the Structure of the North-West Highlands. By Sir RODERICK I. MURCHISON, Bart., F.R.S., Patron of the Society, 18

II. Notes for a Comparison of the Volcanic Geology of Central Scotland with that of Auvergne and the Eifel. By ARCHIBALD GEIKIE, F.R.S., 21

**THURSDAY, 16TH DECEMBER 1869.**

I. Notice of Sandbed occurring in Boulder Clay at Newpark, in the parish of Mid-Calder. By RALPH RICHARDSON, W.S., Newpark House, 24

II. Notes on some Fossils from the Old Red Sandstone. By ADAM MATHIESON, Curator of the Museum, Jedburgh, 26

III. Notes on a Stalactite Cave at Raglan, New Zealand. By W. LAUDER LINDSAY, M.D., F.R.S.E., 26

IV. On the Gold-fields of Forfarshire. By W. LAUDER LINDSAY, M.D., F.R.S.E., 27

**THURSDAY, 20TH JANUARY 1870.**

On Corstorphine Hill, near Edinburgh. By JOHN HENDERSON, 29

**THURSDAY, 17TH FEBRUARY 1870.**

I. Notes on one of the Bathgate Sandhills. By JAMES LINN, Livingstone, Mid-Calder, 33

II. On certain Organic and other peculiar Impressions in the Lower Silurian Strata of Upper Teviotdale. By JAMES ELLIOT, late Professor of Mathematics in Queen’s College, Liverpool, 38

**THURSDAY, 3D MARCH 1870.**

I. Notice of the Geological Features of the Upper Coal Basin of the Firth of Forth. By HENRY CADELL, of Grange, Bo’ness, 39

II. On the Lower Silurian Rocks in the neighbourhood of Galashiels. By CHARLES LAFWORTH, Galashiels, 46

III. On the Old Estuarine Beds of the Carse of Stirling. By JAMES HASWELL, M.A., W.S., 58
CONTENTS.

THURSDAY, 17TH MARCH 1870.

I. On the Probable Cause of the Non-Existence of Deposits between the Permian and the Lower Silurian in the Southern Uplands of Scotland. By DAVID MARSHALL, C.A., 66

II. On the Budleigh Salterton Pebbles. By WILLIAM LINFORD, Exeter, 67

THURSDAY, 28TH APRIL 1870.

I. Suggestions for the Study of the Chemical Geology of the Bathgate Hills. By ANDREW TAYLOR, 73

II. On unpublished Sections illustrating the Superficial Geology of the Northern District of Edinburgh and the immediate Neighbourhood. By ANDREW TAYLOR, 77

III. On the Chromate of Iron, Serpentine, and other Minerals of the Shetland Isles. By SAMUEL MOSSMAN, 78


THURSDAY, 12TH MAY 1870.

I. Notice of Specimen of Lepidodendron, with Cones attached, from Corstorphine Hill, Edinburgh. By GEORGE LYON, 81

II. Note on a species of Conifer, from the Carboniferous Sandstone of Shotts, Lanarkshire. By W. GROSSART, Surgeon, Salsburgh, 81

III. List of Fossils from the Bathgate Limestone. By JAMES LINN, Livingstone, Mid-Calder, 82

IV. On the Discovery of Spirorbis carbonarius in the Limestone of Burdiehouse; and of an Estheria in Camstone Quarry, Arthur’s Seat. By C. W. PEACH, A.L.S., 82

V. On Sections made by the Drainage Operations on the South Side of Edinburgh, illustrative of the Physical Structure of Salisbury Crags. By ANDREW TAYLOR, 82

VI. On the Coniston Limestone of Cumberland and Westmoreland, and its Associated Rocks. By HENRY ALLEYNE NICHOLSON, M.D., D.Sc., F.G.S., 84

THIRTY-SEVENTH ANNIVERSARY MEETING, 3D NOVEMBER 1870.

I. Report on the Affairs of the Society for the Session 1869-70. By GEORGE A. PANTON, Honorary Secretary, 95

II. Report of Society’s Delegates to Meeting of British Association, at Liverpool, in September 1870. By RALPH RICHARDSON, W.S., 103

III. Election of Office-Bearers for Session 1870-71, 103

IV. Treasurer’s Statement for past Year, 104

THURSDAY, 17TH NOVEMBER 1870.

On the Correlation of the Silurian Deposits of the North of England with those of the South of Scotland. By HENRY ALLEYNE NICHOLSON, M.D., D.Sc., F.G.S., Vice-President, 105

THURSDAY, 19TH JANUARY 1871.

On the Origin of the Laterite, or Cabook of Ceylon. By H. F. ALEXANDER, 113

THURSDAY, 16TH FEBRUARY 1871.

Notes on the Coal-Fields at Falkirk. By CHARLES W. PEACH, A.L.S., 118

THURSDAY, 16TH MARCH 1871.

On a New Species of Amblypterus and other Fossil Fish Remains from Pittorthe, Fife. By ROBERT WALKER, St Andrews, 119

THURSDAY, 20TH APRIL 1871.

I. On a Mass of Contorted Sandstone in Hunter’s Bog. By GEORGE LYON, 125

II. On a New Species of Rhizodus. By GEORGE LYON, 125
CONTENTS.

TUESDAY, 16TH MAY 1871.

Notes for a Comparison of the Volcanic Geology of the Phlegraean Fields, Naples, with that of the Centre and West of Scotland. By Professor GEIKIE, F.R.S.,

THIRTY-EIGHTH ANNIVERSARY MEETING, THURSDAY, 2D NOVEMBER 1871.

I. Notice of the Death of Sir Roderick I. Murchison, Bart., K.C.B., the Society's Patron,

II. Bequest to the Society of the original Geological Model of Arthur's Seat, by Mrs Maclaren, widow of Charles Maclaren, F.G.S., formerly President of the Society,

III. Librarian's Annual Report,

IV. Election of Office-Bearers for Session 1871-72,

V. Treasurer's Statement for past Year,

THURSDAY, 7TH DECEMBER 1871.

On the Occurrence of Sanguinolites iridinoides in the Carboniferous Limestone of Middleton. By ALEXANDER SOMERVAIL,

THURSDAY, 8TH FEBRUARY 1872.

I. On the Occurrence of Spirifer ovalis in the Carboniferous Limestone of Mid-Lothian. By ALEXANDER SOMERVAIL,

II. Notice of Stratification underlying the site of the Old Darien House, Edinburgh. By R. THORNTON SHIELDS, Architect,

III. On Local Glaciation in the Pentland Hills. By D. J. Brown,

FRIDAY, 8TH MARCH 1872.

I. On the Recent Progress of Gold-Mining in Australia. By ANDREW TAYLOR,

II. On the Occurrence of Strepsodus and Rhizodopsis in the Upper Coal Measures of Edmonstone, Mid-Lothian. By ALEXANDER SOMERVAIL,

III. On certain Fossils found in the Rocks underlying the South Side of Edinburgh. By JOHN HENDERSON,

THURSDAY, 4TH APRIL 1872.

I. On Blocks and Boulders lying loose on, and imbedded in, the Rocks which form the Seabord of Benholm Parish, Kincardineshire, between low and high water-marks. By Rev. ALEXANDER SMART MYERS, Minister of the Parish,

II. On some Points in the Geology of Edinburgh deserving further Investigation. By Professor GEIKIE, F.R.S.,

III. Notice of a Fault in the Carboniferous Rocks on the Water of Leith, above Currie, with some Observations on the Geology of the District. By JOHN HENDERSON,

THIRTY-NINTH ANNIVERSARY MEETING, THURSDAY, 7TH NOVEMBER 1872.

I. Introductory Address by Mr Milne Home, of Milnegraden, Vice-President, on the Post Pliocene Geology of Scotland,

II. Election of Office-Bearers, &c,

III. Treasurer's Abstract, Session 1871-72,

THURSDAY, 5TH DECEMBER 1872.

On the Volcanic Rocks and Collateral Phenomena of the North Berwick Coast. By RALPH RICHARDSON, W.S.,

THURSDAY, 19TH DECEMBER 1872.

I. On Quarries at Beer, in Devonshire, and some of their Fossils. By WILLIAM LINFORD, Exeter,

II. On the importance of the study of Palaeontology. By THOMAS DAVIDSON, F.R.S., Brighton,

III. Appointment of the Lothians and Fife Palaeontological Committee,
## CONTENTS

**THURSDAY, 16TH JANUARY 1873.**

1. On Bitumens, Oil Shales, and Oil Coals. By **Andrew Taylor**, 187
2. Remarks on Do., by Mr M'Lagan of Pumpherston, M.P., 188
5. Exhibition of Photographs of the Eruption of Mount Vesuvius, by Mr W. T. Black, 191

**THURSDAY, 30TH JANUARY 1873.**

1. On some of the less common Bathgate Fossils. By **James Linn**, Livingstone, 192
2. On the Evidence of the Existence of an Old River Course, previous to the deposition of the Boulder Clay, at the Water of Leith, above Collinton. By **John Henderson**, 196

**THURSDAY, 13TH FEBRUARY 1873.**

2. Exhibition of Specimens of Clayton’s “Patent Condensed Peat,” 205

**THURSDAY, 6TH MARCH 1873.**

1. On Peat as a Substitute for Coal. By **Ralph Richardson**, W.S., 205

**THURSDAY, 20TH MARCH 1873.**

1. Obituary Notice of **James Haswell**, M.A., W.S., late one of the Vice-Presidents of the Society. By **George A. Panton**, 207

**THURSDAY, 3D APRIL 1873.**

2. Discovery of a New Fossil Tree in Craigleith Quarry, Edinburgh. By **George Lyon**, 219

**THURSDAY, 17TH APRIL 1873.**


**THURSDAY, 1ST MAY 1873.**

1. Note of Borings for the Foundation of the Episcopal Cathedral at the west end of Melville Street, Edinburgh. By **Ralph Richardson**, W.S., 224
5. Closing Address by Mr **Andrew Taylor**, Associate, on Current Geological Topics, 242

**FORTIETH ANNIVERSARY MEETING, THURSDAY, 6TH NOVEMBER 1873.**

1. Inaugural Address by Professor **Geikie**, F.R.S., on “Earth Sculpture and the Huttonian School of Geology,” 248
2. Honorary Secretary’s Report for Session 1872-73, 249
3. Report of Lothians and Fife Palaeontological Committee, 250
4. Election of Office-Bearers and Committees for Session 1873-74, 270
5. Treasurer’s Abstract for Session 1872-73, 272
CONTENTS.

THURSDAY, 20TH NOVEMBER 1873.

I. Description of a Section of the Burdiehouse Limestone and connected Strata in Grange Quarry, Burntisland. By ROBERT ETHERIDGE, jun., F.G.S., 273
II. Presentation to Society by Professor de KONINO, M.D., Liege, 276

THURSDAY, 4TH DECEMBER 1873.

I. Notes on the Dutch Peat Industry. By RALPH RICHARDSON, W.S., 276
II. Notes on a Visit to the Connorree Copper and Sulphur Mine, Co. Wicklow. By DAVID MARSHALL, C.A., 282

THURSDAY, 18TH DECEMBER 1873.

Obituary Notice of Professor AGASSIZ. By RALPH RICHARDSON, W.S., 285
I. On some points in the connection between Metamorphism and Volcanic Action. By Professor GEIKIE, F.R.S., 287
II. Note on Fossil Cones from the Airdrie Blackband Ironstones. By GEORGE A. PANTON, 307

THURSDAY, 15TH JANUARY 1874.

I. Notice of Additional Fossils from the Upper Silurian Series of the Pentland Hills. By ROBERT ETHERIDGE, jun., F.G.S., 309
II. On River Denudation, illustrated by the Esk at Hawthornden, &c. By RALPH RICHARDSON, W.S., 313
III. On the Remains of Pterygotus and other Crustacea from the Upper Silurian Series of the Pentland Hills. By ROBERT ETHERIDGE, jun., F.G.S., 314
IV. Mr BALFOUR, B.Sc., on Sigillariae at Sheffield, 316

THURSDAY, 29TH JANUARY 1874.

II. Notes on some new forms of Bivalve Entomonomastrea from the Silurian Rocks of Peeblesshire. By Professor RUPERT JONES, F.R.S., 321

THURSDAY, 12TH FEBRUARY 1874.

II. Mr ANDREW TAYLOR on the Course of the River Almond, 347

THURSDAY, 26TH FEBRUARY, 1874.

I. Notice of a Striated Boulder lately found in Tynecastle Sandpit, Edinburgh. By D. MILNE HOME, LL.D., F.G.S., 347
II. Notice of a Striated Boulder found at Drylaw, near Liberton, East-Lothian. By D. MILNE HOME, LL.D., F.G.S., 347
III. On Glacial Phenomena in the neighbourhood of Edinburgh. By D. J. BROWN, 351
IV. Notice of a Section at Tynecastle. By RALPH RICHARDSON, W.S., 358
V. On Glacial Phenomena in the Pentland Hills and at Tynecastle, near Edinburgh. By JOHN HENDERSON, 360

FRIDAY, 13TH MARCH 1874.

I. Notice of a recent instance of Coal being converted into Graphite during an explosion in a Lancashire Coal-pit. By ANDREW TAYLOR, 368
II. On the Coalfield of Brora, Sutherlandshire. By WILLIAM PAYNE, Inverness, 368
III. Chemical Notes on an Analysis of various Coals and Peat Fuels. By ANDREW TAYLOR, 371
IV. On a New Zealand Shale. By C. W. PEACH, A.L.S., 373
<table>
<thead>
<tr>
<th>Date</th>
<th>Title</th>
<th>Author</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRIDAY, 20TH MARCH 1874</td>
<td>I. On some Silurian Fossils from the Pentland Hills.</td>
<td>JOHN HENDERSON</td>
<td>878</td>
</tr>
<tr>
<td></td>
<td>II. Note on the Graptolites found by Mr Henderson at Habbie's Howe, Logan Burn.</td>
<td>CHARLES LAPWORTH, F.G.S., Galashiels</td>
<td>875</td>
</tr>
<tr>
<td>THURSDAY, 16TH APRIL 1874</td>
<td>On a new theory for the Formation of Till or Boulder Clay.</td>
<td>D. J. BROWN</td>
<td>883</td>
</tr>
<tr>
<td>THURSDAY, 30TH APRIL 1874</td>
<td>I. On Fossils from the Conglomerate at Habbie's Howe, Logan Burn, near Edinburgh.</td>
<td>JOHN HENDERSON</td>
<td>389</td>
</tr>
<tr>
<td></td>
<td>II. On some Sections of Boulder Clay, Peat, and Stratified Beds recently exposed at Redhall Quarry.</td>
<td>JOHN HENDERSON</td>
<td>391</td>
</tr>
<tr>
<td>THURSDAY, 14TH MAY 1874</td>
<td>I. On an Analysis of a Lepidodendroid Plant in Shale, with Remarks on the Formation of Coal.</td>
<td>JOHN GELLATLY, West Calder</td>
<td>395</td>
</tr>
<tr>
<td></td>
<td>II. Notice of a large Quartz Boulder, called &quot;The White Stone,&quot; in the town of Peebles.</td>
<td>RALPH RICHARDSON, W.S.</td>
<td>397</td>
</tr>
<tr>
<td></td>
<td>III. On Specimens of Holothyrhus nobilissimus from the Black Hill, near Melrose.</td>
<td>CHARLES W. PEACH, A.L.S.</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>IV. Notice of Carboniferous Polyzoa from Shales at Hairmyres, near East Kilbride, Lanarkshire.</td>
<td>JOHN YOUNG, Hunterian Museum, Glasgow</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>V. Closing Address &quot;On the possibility of our successfully calculating the Antiquity of the Earth.&quot;</td>
<td>ANDREW TAYLOR</td>
<td>402</td>
</tr>
</tbody>
</table>