Aberdeen, Kettle-holes in and near, 23
—— Occurrences of Old Red Sandstone in and near, 117
—— District, Exhibition of a Glaciation Map of, 117
Aberdeenshire, A Diopside-bearing Pegmatite near Ellon, 353
—— Norwegian Boulders from, 230
—— The Contaminated Magmas of, 265
—— Vascular Plants of the Chert Band, Rhynie, 257
Acid Potassium Sulphate as a Petrochemical Test and Solvent, 119
ALLAN, D. A., British Association Excursions, Liverpool, 407
—— ROBERT, Notes on the Lochend Sill, 117
ALLEN, S., 321, 326
—— Ammonites, A Boulder containing, from Dunbeath, Caithness, 1
—— Analyses, Basalt from The Leithies, North Berwick, 301
—— Brewing-water from Craiglockhart, 272
—— Duddingston, 272
—— Dolerite and Hornfels of Auchinoin, 128
—— “Edmondia Shale,” 386
—— Granitic Intrusions in S.E. Scotland, 364
—— Houston Marl, 327, 331-335
—— Natural Mineral Oils, 324, 325
—— Volcanic ashes at Gullane, 190
ANDERSON, D., Glacial Drainage Phenomena near Edinburgh, 264
—— Retreat of Ice Sheet, S.E. of Edinburgh, 256
Anglesian Map and Memoir, Note on, 262
—— Apples, Coal, 58
—— Auchinoin, Analyses of Dolerite and Hornfels at, 128
—— Marginal Intrusive Phenomena at, 50
Avicolopteris, 369
Ayrshire Bauxitic Clay, The, 255
—— Volcanic Necks in N.W., 110
BAILEY, E. B., and J. MATHIESON, Glacial Strand-lines of Loch Tulla, 193
—— Geology of Mull, 269
—— Obituary Notice of Dr C. T. Gough, 226
—— Recent advances in Highland Geology, 261
—— Volcanic Vent Parasitic on St Leonard’s Sill, 223
—— 267, 309, 385
BAILEY, E. M., 320, 323, 326
Balerno, Ravelrig and Kaimies Quarries, 14, 16, 17
BALFOUR, Sir ISAAC BAYLEY, Obituary Notice of, 392
BALSILLIE, D., Geology of Kinkell Ness, Fife, 111
—— The Glossopteris Flora, 114
—— The Geology of the Largo District, 408
—— Volcanic Vents near St Andrews, 69
—— in East Fife, New, 81
—— 276, 365, 366, 374
Bantffshire, Norwegian Boulders from, 230
Barytes, Exhibition of Scottish, 107
—— Basalt, Analyses of, from the Leithies, North Berwick, 301
—— Girnal Craig, 223
—— Laccolite in the Bo’ness Coalfield, 214
—— Veining and Metasomatism in, 6
BATHURST, Dr, 275, 278, 279, 280, 287
—— Bauxitic Clay, The Ayrshire, 255
BEGG, JAMES, 279
BELL, D., 308
BERNARD, Messrs T. & J., Ltd., 271, 272
—— Birrenswork Volcanic Group, 88, 89
—— Bituminous Sands of N. Alberta, Canada, 250
—— Blue Cairn, Dry Channel at, 310
—— Bo’ness Coalfield, A Basalt Laccolite in, 214
—— Borehole in the Grange District, Edinburgh, 18
—— BOREHOLE IN THE GRANGE DISTRICT, EDINBURGH, 18
BOWIE, J. D., 131
—— Brachyrhinodon, 13
—— Breich Pit, West Calder, 319
—— BRENNER, A., Glacial and Post-glacial Geology of the Dee Valley, 259
—— Low-level Kettle-holes in and near Aberdeen, 23
—— Glacial Geology of the Stonehaven District, 25
—— Limits of Valley Glaciation in the Basin of the Dee, 61
—— Norwegian Boulder from Aberdeen, 230
—— British Association Excursions, Liverpool, 407
—— Broad Law Granitic Intrusion, 361
—— Bushveld Igneous Complex of the Transvaal, 401
—— CADELL, H. M., a Basalt Laccolite in the Bo’ness Coalfield, 214
CADELL, H. M., Exhibition of Sketches of Spitzbergen, 263
— Peat and its Utilisation, 246
— The Edge of a Carboniferous Volcano, 267
— 274, 327, 404
Caithness, A Boulder containing Ammonites, from Dunbeath, 1
Carboniferous Sandstone Series, Edinburgh, Bore in, 13
Calmy Limestone at Culross, 386
CAMPBELL, R., Green Rocks of the Highland Border Series in Forfarshire and Kincardineshire, 109
— Norwegian Boulder from Aberdeenshire, 230
— Obituary Notice of Prof. James Geikie, 282
— Pot-holes of Old Red Sandstone Age, 400
— Recent Contributions to the Geology of Spitzbergen, 263
— Supplies in Scotland of Felspars suitable for Industrial Purposes, 115
— 105, 365, 386
Carboniferous Volcano, the Edge of a, 267
Carlops, Dry Valley of Windy Gowl, 266
CAWHRENS, R. G., Some Occurrences of Natural Mineral Oil in the Scottish Shale Fields, 319
Cone-in-cone Structure, 368
Contact Metamorphism in Strathbogie, 400
Contaminated Magmas of Aberdeenshire, 263
Correlation of Chemistry and Geology, 409
Corstorphine, the Draining of the Old Loch at, 54
Craigdubh, Sholl Limestone at, 369, 370
— Syncline, 368
— Vents at, 367, 380
Craiglockhart, Bore for Brewing-Water at, 371
CHAMPTON, C. B., 168
Crinoids in the Carboniferous Limestones of Scotland, 275
Culross, Calmy Limestone at, 386
Dalroy, Morayshire, Manganese at, 135
DAY, T. CUTHBERT, A New Volcanic Vent and other New Geological Features on the Shoro, Weak Law, near Gullane, 185
DAY, T. CUTHBERT, Chemical Analyses of Dolerite and Hornfels of Auchinoon, 125
— Igneous Intrusive Phenomena at Upper Whitfield, near Maebiehill; and at Ravelrig and Kaimes Hill Quarries, Balerno, 14
— Marginal Intrusive Phenomena near Linlithgow, and at Auchinoon, 50
— Note on the Dry Valley of Windy Gowl, Carlops, 266
— Note on the Exposure of St Leonard’s Crags, at No. 39 St Leonard’s Hill, 266
— Photograph and Note on River Deposit in Cave at Blackford Hill, 407
— The Leithies, North Berwick, 300
— Two Unrecorded Volcanic Vents on the Shore east of North Berwick, 328
— Veining and Metasomatism in Basalt at Upper Whitfield, near Maebiehill, 6
— 223
Dee, Limits of the Valley Glaciation in the Basin of the, 54
— Valley Drift, Distribution of the, 30
— Glacial and Post-glacial Geology of the, 259
Devon, Notes on the Former Course of the River, 106
Diatomaceous Earth, near the East-end of Loch Leven, Kinross-shire, 3
DINHAM, C. H., 115
Diopside-bearing Pegmatite near Ellon in Aberdeenshire, 353
DIxon, E. E. L., 315
Dolerite and Hornfels of Auchinoon, Analyses of, 128
Donmouth Sediments, Heavy Minerals of the, 182
Draining of the Old Lochs at Gogar and Corstorphine, 54
Dron, R. W., 389
Dry Valley of Windy Gowl, Carlops, 266
Durnortierite in British Rocks, 352
Dunbeath, Caithness, A Boulder containing Ammonites from, 1
Duncan, J., 3, 276
Dunlop, R., 276, 277, 278, 279
Dunnet Mine, Broxburn, 319
ECKFORD, R. J. A., and W. MANSON, Certain Glacial Phenomena in the Central Tweed Area, 308
Edinburgh, Borehole in the Grange District, 18
— Evidence of the Retreat of an Ice Sheet to the South-East of, 256
— Girnal Craig Basalt, 223
— Glacial Drainage Phenomena in the Neighbourhood of, 264
— Volcanic Vent Parasite on St Leonard’s Sill, 223
"Edmondia" putictatella in Fife, 386
INDEX.

"Edmondia Shale," Analyses of, 386
Edwards, W. S. G., Bituminous Sands of Northern Alberta, Canada, 250
"Encrinite Bed," 366, 367, 368, 369
Epeotesuchus, 13
Esker at Holylee, 315
Estheria, 132
punctatella (see "Edmondia," p. 386)
Eurynotus ocreatus, 132
Explosion Fissure, 377
Esker at Holylee, 315
Esker at Holylee, 315
Felspars in Scotland, Supplies of, 115
Fenestella, 369
Fife, Descriptions of some New Volcanic Vents in East, 81
— discovery of "Edmondia" punctatella in, 386
— lower Carboniferous Limestones of St Monans, 165
Flett, J. S., Iron-ore Deposits of Noblehouse and Garron Point and their Genesis, 248
— submarine Contours around the Orkneys, 42
— 105, 253
Flinty Crush Rocks, 405
Forfarshire, Green Rocks of the Highland Border in, 109
Fossiliferous Sandstone from Dunbeath, Caithness, 2
Fossils, Crinoids in the Carboniferous Limestones in Scotland, 275
— of St Monans, List of Limestone, 181
Garron Point, Iron-ore of, 248
Geikie, A., 86, 290, 357, 360, 362, 366, 370, 374
— James, 61, 65, 308
— obituary Notice of, 282
Gibb, A. W., Norwegian Boulder from Aberdeenshire, 230
Gibson, W. A. L., obituary Notice of Cha. Lyneworth, 259
— Yorks., Notts. and Derbyshire Coalfield, 255
Girnal Craig Basalt, 223
Glacial and Post-glacial Geology of the Dee Valley, 259
— drainage Phenomena near Edinburgh, 264
— Geology of the Stonehaven District, 25
— Phenomena in the Central Tweed Area, 308
— Strand-lines of Loch Tulla, 193
Glaciation Map of the Aberdeen District, 117
— in the Basin of the Dee, Limits of Valley, 61
Glass Industry, Raw Materials of the, 115
Glencartholm Volcanic Group, 88, 89, 93
Glossopteris Flora, The, 114
Gogar, Draining of the Old Loch at, 54
Goodchild, J. G., 347
Gordon, Rev. Dr, 11, 13
Gordonia Beds, Heavy Minerals of the, 159
Granitic Intrusions in S.E. Scotland, 357
Granton, The Rocks between Leith and, 346
— Shrimp-bearing Limestone at, 131
Grav, Mrs Robert, Obituary Notice of, 392
Grestmore Neck, Roxburghshire, The, 99
Greenly, Edward, 252
Green Rocks of the Highland Border, 109
Gregory, C. J., 194, 199
— J. W., 194
Grieston, Overflow-channel at, 315, 316
Gullane, A New Volcanic Vent at Weak Law, 185
Haldane, D., Discovery of "Edmondia" punctatella in Fife, 386
Heavy Minerals in Sedimentary Rocks, 138
Hercynian Overthrust in the Belgian Coalfields, 402
Highland Border Rocks in Forfar and Kincairdie, 109
— geology, Recent Advances in, 261
— River Development in the East-central, 110
Hind, W., 386, 387
Holodicyphus, 13, 18, 21
Holstfdahl, O., The Geology of Novaya Zemlya, 404
Holylee Esker, The, 315
Horne, James, 105
— John, The Hercynian Overthrust in the Belgian Coalfields, 402
— 19, 88, 273, 290
Hornfels of Auchinoo, Analyses of the, 128
Houston Marl, Analyses of, 327, 331-335
— petrological Notes on the, 327
Hunter, Dr, 275
Huxley, 11, 13
Hyperodapedon, 13
Ice Sheet S.E. of Edinburgh, Retreat of the, 256
Igneous Intrusive Phenomena at Macbethhill and Balerno, 14
— rocks of Teviot and Liddisdale, 86
Intrusions in the Pentland Hills, Two Unrecorded, 383
— in S.E. Scotland, Four Granitic, 357
Intrusive Phenomena, the Leithies, North Berwick, 300
— near Linlithgow and Auchinnoon, Marginal, 50
Iron Industry in Scotland, 252
— ore Deposits of Noblehouse and Garron Point, 248
Jamieson, T. F., 63, 308
Jedburgh Plugs and Necks, 92
Jehu, T. J., Observations on Flinty Crush Rocks, 405
— origin of Terrestrial Vertebrates, 251
EDINBURGH GEOLOGICAL SOCIETY.

JEHU, T. J., Some Obscure Factors in Coastal Changes, 106
— Some Recent Views on the Origin of Man, 253
— — 365
Jenny Pate Limestone, see Calmy Limestone
JONES, T. RUPERT, 387
Jurassic Fossils from Banffshire, 400
of Morayshire, Heavy Minerals of the, 161
— Shore Line, A, 108

Kaiines Hill Quarry, Balerno, 14, 16, 17
KENDALL, P. F., 308, 309
Kettle-holes in and near Aberdeen, 23
KIDSTON, R., Obituary Notice of, 383
— — Vascular Plants of the Rhynie Chert Band, 257
— — 131
Kincardineshire, Highland Border Rocks in, 109
Kinkell Ness, Fifeshire, The Geology of, 111
— and Kingsk, Fifeshire, The Geology of, 370
KIRK, S. R., The Geology of the Coast between, 366
Kinross-shire, On a Deposit of Diatomaceous Earth near Loch Leven, 3
KIRKBY, J. W., 168, 366, 368, 369
Kock Hill, Limestone at, 370
KNOTT, CARGILL G., Obituary Notice of, 384
Knowo's Dean, Overflow-Channel at, 312

Lamberton Beach Granitic Intrusion, 382
Lamprophyres, 384, 385
LAPWORTH, CHARLES, Obituary Notice of, 132
Largo District, Geology of the, 408
Lauder Burn Overflow-Channel, 311
Launderdale, A Monchiquite Dyke in, 390
Laurnvikite Boulders from Aberdeenshire, 230
Lavas, Old Red Sandstone, 21
LEE, G. W., 1, 2, 291, 387
Leith and Granton, The Rocks between, 346
Leithies, North Berwick, The, 300
Lepidodendron, 367
— Lepidodendron, 367, 369
Lhanbryde, Morayshire, Trains of Urquhart and, 11
Liddisdale, Igneous Rocks of Teviot and, 86
Limestones of St Monans, Lower Carboniferous, 165
Limits of the Valley Glaciation in the Basin of the Dee, 61
Linlithgow, Marginal Intrusive Phenomena near, 59
Lithostrotion, 574
Loshend Sill, Notes on the, 117
Loch Leven, Kinross-shire, Diatomaceous Earth near, 3

Loch Tulla, Glacial Strand-lines of, 193
Loess from Spitsbergen and Yunnan, 400
Lossiemouth, The Trias of, 11
Lower Carboniferous Limestones of St Monans, Fife, 165, 296
— — Sea-line, Fife, 293
LUNN, J. W., Two Unrecorded Intrusions in the Pentland Hills, 383
Macbiehill, Intrusive Phenomena near, 14
— Veining and Metasomatism in Basalt near, 6
MACCONECHIE, A., 131
— Obituary Notice of, 356
MACGREGOR, A. J., Notes on the Traprain Law Phonolite, 401
MACGREGOR, MURRAY, A Jurassic Shoreline, 108
— History of Iron Industry in Scotland, 222
— Millstone Grit of the Central Coalfield of Scotland, 406
MACKIE, W., Acid Potassium Sulphate as a Petrochemical Test and Solvent, 119
— Dumortierite in British Rocks, 352
— Heavy Minerals in Sedimentary Rocks in N.E. Scotland, 138
— Obituary Notice of William Taylor, 243
— Purple Zircons in Sedimentary Rocks of Scotland, 200
— — 13
M'KILLOP, G. F., 320, 323, 326
M'LINTOCK, W. F. P., 252
MACNAIR, P., 167, 276, 387
M'ROBERT, R. W., Igneous Rocks of Teviot and Liddisdale, 86
Magmas of Aberdeenshire, The Contaminated, 268
Malchites, 385
Manganese, A New Locality for, 135
MANSON, W., and R. J. A. ECKFORD, Certain Glacial Phenomena in the Central Tweed Area, 303
— Exhibition of Rheic Fossils from Mull, 400
Maps of Corstorphine, Old, 54
Marginal Intrusive Phenomena at Linlithgow and Auchinooon, 50
Marine Zones in the Calciferous Sandstone Series of Fife, 367
MASTERTON, J., Coal Apples, 58
MATHIESON, JOHN, The Topography of Spitaergen, 262
— — 105, 106, 108
— — and E. B. BAILEY, Glacial Strand-lines of Loch Tulla, 193
Metasomatism in Basalt near Macbiehill, Veining and, 6
Millstone Grit of the Central Coalfield of Scotland, 406
INDEX.

Mineral Oil, Natural, Analyses of, 324, 325
— — — in the Scottish Shalefields, 319
Veins, Some Scottish, 249
Minerals, Heavy, in Sedimentary Rocks of Scotland, 138
Monchiquite Dyke in Lauderdale, 390
— of Craigduff Intrusions, 381
— — Rock and Spindle, 378
MUFF, H. B., 308
Mull, The Geology of, 269
Myalina Limestone, 368, 369
Vaidites, 369
Natural Mineral Oil in the Scottish Shalefields, 319
Nautilus, 132
Necks in N.W. Ayrshire, Volcanic, 110
Norwegian Boulders from Aberdeenshire and Banffshire, 230
Nottinghamshire Coalfield, 265
Novaya Zemlya, The Geology of, 401

Obituary Notices:—
Balfour, Prof. Sir Isaac Bayley, 392
Clough, Dr C. T., 236
Geikie, Prof. James, 232
Gray, Mrs Robert, 392
Kidston, Dr Robert, 398
Knott, Dr Cargill G., 394
Lapworth, Dr Charles, 239
Macconochie, A., 395
Taylor, William, 243
Teali, Sir J. J. H., 397

OGILVIE, A. GRANT, 267
Olcostep anus, 2
Oldest Maps of Corstorphine, 54
Old Red Sandstone in and near Aberdeen, 117
— — — etc., Bore in, at Grange, Edinburgh, 18
Origin of Man, Some Recent Views on the, 253
— — Terrestrial Vertebrates, 251
Orkneys, Submarine Contours around the, 42
Ornithosuchus, 13
Orthoceras, 132
Overflow-Channels, Glacial, 34, 308, 310, 312, 315
Partan Craig Vent, North Berwick, 342
Peach, B. N., 21, 86, 88, 102, 131, 230, 390
Post and its Utilisation, 246
Pegmatite, A Diopside-bearing, near Elgin, 353
Pentland Hills, Two Unrecorded Intrusions in the, 333

Petrochemical Test and Solvent, Acid
Potassium Sulphate as a, 119
Petrographical Province of Western Scotland, The Late-Carboniferous, 104
Petrological Notes on the Houston Marl, 327
Phonolite of Traprain Law, 401
Pittenweem, Volcanic Vents at, 83
Place of Geology in Science, 399
Pont, Timothy, Old Map by, 54
Posidonomya punctatella, see "Edmondia" p. 386.
Post-glacial Geology of the Dee Valley, 259
Pot Holes of Old Red Sandstone Age, 490
Potassium Sulphate, Acid, as a Petrochemical Test, 119
Pre-glacial Channel of the Water of Leith, 347
Priestlaw Granite Intrusion, 360
Purple Zircons in the Sedimentary Rocks of Scotland, 200

RAILEY, E. G., Chemical Analyses of the Houston Marl, 327
Raised Beaches at Stonehaven, 39
RANKE'S, CLERK, 272
Raveling Quarry, Balerno, 14, 16, 17
Raw Materials of the Glass Industry, 116
Read, H. H., A Diopside-bearing Pegmatite near Elgin, Aberdeenshire, 353
— — Contact Metamorphism in Strathbogie, 400
— — Contaminated Magmas of Aberdeenshire, 268
— — Exhibition of Jurassic Fossils from Banffshire, 400
— — Norwegian Boulder from Banffshire, 230
Retreat of an Ice Sheet S.E. of Edinburgh, Evidence of, 256
Reptiles, Triassic, A New Localitv for, 11
Rhadinichthys brevis, 132
Rhetitic Fossils from Mull, 400
Rhodes, J. E. Wynfield, Former Course of the River Devon, 106
Rhomb-porphyry Boulders from Aberdeenshire and Banffshire, 230
Rhynie Chert Plants, 257
River Deposit at Blackford Hill, 407
— Development in the East-central Highlands, 110
Rock and Spindle Vent, 369, 373
ROGERS, A. F., 98
St Andrews, Some Volcanic Vents near, 69
St Leonard's Crag, Note on Exposure of, 266
St Leonard's Sill, Volcanic Vent Parasite on, 223
St Monans, Fife, Lower Carboniferous Limestones of, 165
Salt Industry in Scotland, 251
Sediments, 13
Sands, Bituminous, of Northern Alberta, 259
Scenery of Spitsbergen, 263
Scleromochlus, 13
Scotland, Heavy Minerals in the Sedimentary Rocks of N.E., 138
—— Sedimentary Rocks of, Source of Purple Zircons of the, 200
—— Supplies of Felspars in, 115
Scotlandwell, 3
Scott, T., 5
Scottish Mineral Veins, Some, 249
Sedimentary Rocks, Heavy Minerals in, 138
of Scotland, Source of Purple Zircons of the, 200
Shand, S. J., Sketches of South African Geology, 112
—— Bushveld Igneous Complex of the Transvaal, 401
Shrimp-bearing Limestone at Granton, Edinburgh, 131
Sinclair's "Short History of Coal," 1672, 105
Sladen, W. P., 290
Small, Richard, 1
Smith, John, 58, 59, 276, 277
South African Geology, Sketches of, 112
Sphen, Special Tests for, 120
Sphenopteris, 367, 369
Spitsbergen, Recent Contributions to the Geology of, 265
—— Scenery of, 263
—— Topography of, 262
Springer, Dr F., 275, 278, 279
Spynie, 11, 13
Stagoconeis, 11, 13
Stank, The, Corstorphine, 54
Stenomotoceras, 13
Stevenson, W., 357, 360
Stonehaven District, Glacial Geology of, 29
Strathmore Drift, Distribution of the, 29
Submarine Contours around the Orkneys, 42
Sutherland, Alex., 1
—— A Jurassic Shore-line, 108
Tait, David, On a Bore for Brewing-Water near Craiglockhart, 271
—— Section in a Borehole in the Cretaceous Sandstone Series, Upper Old Red Sandstone and Lower Old Red Sandstone Laves, in the Grange District, Edinburgh, 18
—— Section of the Wardie Shales with Igneous Intrusions, exposed in the Stank, Corstorphine; and on the Draining of the Old Lochs at Gogar and Corstorphine, 54
—— Shrimp-bearing Limestone in the Cretaceous Sandstone Series at Granton, Edinburgh, 131
—— Sinclair's "Short History of Coal," 1672, 105
—— The Rocks between Leith and Granton, with Historical Notes on the working of the Wardie Coal, 246
Tait, David, 1, 3, 275, 327
—— and Jas. Wright, Structure Character and Relationship of the Lower Carboniferous Limestones of St Monans, Fife, 165
Taylor, William, A New Locality for Triassic Reptiles, with Notes on the Trias found in the Parishes of Urquhart and Lhanbryde, Morayshire, 11
—— Obituary Notice of, 243
Teall, J. J. H., Petrological Notes on the Houston Marl, 327
—— 359, 360
—— Obituary Notice of, 397
Tealliocaris, 192
Telepeton, 11, 13
Terraces of the River Tweed, 313
Terrestrial Vertebrates, Origin of, 251
Teviot and Liddisdale, Igneous Rocks of, 86
Three petwood Overflow-Channel, 311
Topography of Spitsbergen, 263
Transcurrent Faults, 366
Traprain Law Phonolite, 401
Thraquir, R. H., 13, 131
Triss of Morayshire, The Heavy Minerals of the, 159
—— of Urquhart and Lhanbryde, Morayshire, 11
Triassic Reptiles, A New Locality for, 11
Tuila, Glacial Strand-lines of Loch, 193
Tweed Area, Glacial Phenomena of the Central, 308
—— River Terraces of the, 313
Threlfall, G. W., The Late-Carboniferous Petrographical Province of Western Scotland, 104
—— 391
Upper Old Red Sandstone at Craiglockhart, 271
Upper Whitfield, Intrusive Phenomena at, 14
—— Veining and Metasomatism at, 6
Urquhart and Lhanbryde, Morayshire, Trias of, 11
Valley, Glaciation in the Basin of the Dee, Limits of the, 61
Vascular Plants of the Rhynie Chert, 257
Veining and Metasomatism in Basalt, Macliehill, 6
Vertebrates, Origin of Terrestrial, 251
Volcanic Ashes at Gullane, Analyses of, 190
—— Necks in N.W. Ayrshire, Some, 110
—— Rocks of the Cementstone Series, 92
—— Vent at Weak Law, Gullane, 185
—— Parasitic on St Leonard's Sill, 223
—— Vents near St Andrews, 69
—— in East Fife, Some New, 81
—— East of North Berwick, Two Unrecorded, 338
INDEX.

Volcano, The Edge of a Carboniferous, 267
—— The West Lothian, 404

Walker, Frederick, Four Granitic Intrusions in S.E. Scotland, 357
—— A Monechiquite Dyke in Lauderdale, 390

Wallace, Thomas D., A New Locality for Manganese, 135
—— Mrs, 382

Wardie Coal, Historical Notes, 346, 349, 350, 351
—— Shales at Corstorphine, 54

Watson, J. Adam, The Correlation of Chemistry and Geology, 409

Weak Law, Gullane, Volcanic Vent at, 185

West Lothian Volcano, 404
Westwood Pit, West Calder, 320
Whitecross, John, 341
White Trap, 372, 379

Wilson, G. V., Volcanic Vents in N.W. Ayrshire, 110
—— Raw Materials of the Glass Industry, 116
—— Some Scottish Mineral Veins, 249
—— The Ayrshire Bauxitic Clay, 255
—— The Lower Carboniferous Limestones of St Monans, Fife, 185
—— and D. Tait, The Lower Carboniferous Limestones of St Monans, Fife, 185

Windy Gowl, Carlops, 266

Wright, James, Notes on the Occurrence of Crinoids in the Carboniferous Limestones in Scotland, 275
—— and D. Tait, The Lower Carboniferous Limestones of St Monans, Fife, 185

Yellow Man Vent, North Berwick, The, 338

Yorkshire Coal Field, 265

Zircons, Purple, in the Sedimentary Rocks of Scotland, 290
**CONTENTS.**

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. ALEXANDER SUTHERLAND, A Boulder containing Ammonites from Dunbeath, Caithness</td>
<td>1</td>
</tr>
<tr>
<td>II. G. W. LEE, Note on Fossiliferous Sandstone from Dunbeath, Caithness</td>
<td>2</td>
</tr>
<tr>
<td>III. J. DUNCAN, On a Deposit of Diatomaceous Earth near the East End of Loch Leven, Kinross-shire</td>
<td>3</td>
</tr>
<tr>
<td>IV. T. CUTHBERT DAY, Veining and Metasomatism in Basalt at Upper Whitfield, near Macbiehill. (With Plates I and II)</td>
<td>6</td>
</tr>
<tr>
<td>V. WILLIAM TAYLOR, A New Locality for Triassic Reptiles, with Notes on the Trias found in the Parishes of Urquhart and Lhanbryde, Morayshire</td>
<td>11</td>
</tr>
<tr>
<td>VI. T. CUTHBERT DAY, Igneous Intrusive Phenomena at Upper Whitfield, near Macbiehill; and at Ravelrig and Kames Hill Quarries, Balerno. (With Plates III-VI)</td>
<td>14</td>
</tr>
<tr>
<td>VII. D. TAIT, On the Section in a Bore-hole in the Calciferous Sandstone Series, Upper Old Red Sandstones and Lower Old Red Sandstone Lavas in the Grange District, Edinburgh</td>
<td>18</td>
</tr>
<tr>
<td>VIII. ALEXANDER BREMNER, Low-level Kettle-holes in and near Aberdeen</td>
<td>23</td>
</tr>
<tr>
<td>IX. ALEXANDER BREMNER, The Glacial Geology of the Stonehaven District</td>
<td>25</td>
</tr>
<tr>
<td>X. J. S. FLETT, The Submarine Contours around the Orkneys. (With Plate VII)</td>
<td>42</td>
</tr>
<tr>
<td>XI. T. CUTHBERT DAY, Marginal Intrusive Phenomena near Linlithgow and at Auchincoon. (With Plate VIII)</td>
<td>50</td>
</tr>
<tr>
<td>XII. D. TAIT, Notes on a Section of the Wardie Shales, with Igneous Intrusions, exposed in the Stank, Corstorphine; and on the Draining of the Old Lochs at Gogar and Corstorphine. (With Plate IX)</td>
<td>54</td>
</tr>
<tr>
<td>XIII. J. MASTERTON, Coal Apples</td>
<td>58</td>
</tr>
<tr>
<td>XIV. ALEXANDER BREMNER, Limits of the Valley Glaciation in the Basin of the Dee</td>
<td>61</td>
</tr>
<tr>
<td>XV. D. BALSILLIE, Descriptions of some Volcanic Vents near St Andrews. (With Plate X)</td>
<td>69</td>
</tr>
<tr>
<td>XVI. D. BALSILLIE, Descriptions of some New Volcanic Vents in East Fife</td>
<td>81</td>
</tr>
<tr>
<td>XVII. RACHEL WORKMAN M'ROBERT, Igneous Rocks of Teviot and Liddisdale. (With Plates XI-XIV)</td>
<td>88</td>
</tr>
<tr>
<td>Record of Papers read and of Exhibits, Sessions 1915-1916, 1916-1917, and 1917-1918</td>
<td>104</td>
</tr>
</tbody>
</table>

**The authors alone are responsible for the facts and opinions contained in their respective papers.**
# Publications of the Edinburgh Geological Society

<table>
<thead>
<tr>
<th>Volume</th>
<th>Part</th>
<th>(Plates)</th>
<th>To the Fellows.</th>
<th>To the Public.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>I</td>
<td>2</td>
<td>2</td>
<td>0 6</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>6</td>
<td>Out of Print.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>9</td>
<td>3</td>
<td>0 0</td>
</tr>
<tr>
<td>II</td>
<td>I</td>
<td>9</td>
<td>3</td>
<td>0 0</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>1</td>
<td>2</td>
<td>0 0</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>4</td>
<td>4</td>
<td>0 0</td>
</tr>
<tr>
<td></td>
<td>Complete</td>
<td></td>
<td>8</td>
<td>0 12</td>
</tr>
<tr>
<td>III</td>
<td>I</td>
<td>4</td>
<td>4</td>
<td>0 5</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>6</td>
<td>Out of Print.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>7</td>
<td>Out of Print.</td>
<td></td>
</tr>
<tr>
<td>IV</td>
<td>Part I</td>
<td>4</td>
<td>4</td>
<td>0 0</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>2</td>
<td>4</td>
<td>0 5</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>1</td>
<td>4</td>
<td>0 5</td>
</tr>
<tr>
<td></td>
<td>Complete</td>
<td></td>
<td>12</td>
<td>0 16</td>
</tr>
<tr>
<td>VI</td>
<td>Part I</td>
<td>1</td>
<td>2</td>
<td>0 3</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>3</td>
<td>2</td>
<td>0 3</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>4</td>
<td>2</td>
<td>0 3</td>
</tr>
<tr>
<td></td>
<td>IV</td>
<td>3</td>
<td>1</td>
<td>0 2</td>
</tr>
<tr>
<td></td>
<td>V</td>
<td>4</td>
<td>2</td>
<td>0 3</td>
</tr>
<tr>
<td></td>
<td>Complete</td>
<td></td>
<td>10</td>
<td>0 13</td>
</tr>
<tr>
<td>VII</td>
<td>Part I</td>
<td>2</td>
<td>2</td>
<td>0 3</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>1</td>
<td>1</td>
<td>0 2</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>16</td>
<td>7</td>
<td>0 9</td>
</tr>
<tr>
<td></td>
<td>IV</td>
<td>11</td>
<td>6</td>
<td>0 8</td>
</tr>
<tr>
<td></td>
<td>Complete</td>
<td></td>
<td>14</td>
<td>0 18</td>
</tr>
<tr>
<td>VIII</td>
<td>Part I</td>
<td>3</td>
<td>5</td>
<td>0 7</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>2</td>
<td>3</td>
<td>0 5</td>
</tr>
<tr>
<td></td>
<td>Special Part (62 Illustrations)</td>
<td>4</td>
<td>0 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Part III</td>
<td>5</td>
<td>Complete</td>
<td>15 0 22</td>
</tr>
<tr>
<td>IX</td>
<td>Part I</td>
<td>4</td>
<td>3</td>
<td>0 5</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>8</td>
<td>2</td>
<td>0 3</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>12</td>
<td>4</td>
<td>0 6</td>
</tr>
<tr>
<td></td>
<td>IV</td>
<td>8</td>
<td>4</td>
<td>0 6</td>
</tr>
<tr>
<td></td>
<td>Special Part (65 Illustrations)</td>
<td>Out of Print.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Part V</td>
<td>8 Plates and Map</td>
<td>3 0 4 0</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Part I</td>
<td>8</td>
<td>4</td>
<td>0 5</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>15</td>
<td>6</td>
<td>0 7</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>20</td>
<td>5</td>
<td>0 7</td>
</tr>
<tr>
<td></td>
<td>Complete</td>
<td></td>
<td>14 0 18</td>
<td></td>
</tr>
<tr>
<td>XI</td>
<td>Part I</td>
<td>14</td>
<td>7 5</td>
<td>10 0</td>
</tr>
<tr>
<td></td>
<td>Roll of Members</td>
<td>0 3</td>
<td>0 6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Laws of the Society</td>
<td>0 3</td>
<td>0 6</td>
<td></td>
</tr>
</tbody>
</table>

Orders for the Society's Publications, and all other communications, should be addressed to the Honorary Secretary, Geological Society, Synod Hall Buildings, Edinburgh.

The **Edinburgh Geological Society** was founded in 1834; but it did not publish Transactions till 1868. Fellows pay an Entrance Fee of 10s. 6d., and an Annual Subscription of 12s. 6d.; or a single payment may be made for Life of £6:16:6. Life Members and Fellows who have paid Annual Subscriptions to the amount of Two Guineas may receive the Society's Diploma on payment of a fee of 7s. 6d. Candidates for election must be nominated by two Ordinary Fellows.

The Society is supported solely by the Annual Subscriptions of its Ordinary Fellows, and derives no pecuniary aid from Government.