

ALPHABETICAL INDEX

TO THE

PROCEEDINGS OF THE GEOLOGICAL SOCIETY.

[The fossils referred to are described, and those of which the names are printed in italics are also figured.]

- ABERDEENSHIRE, an outlier of lias in, 131.
- Abich, H., on some points in the history and formation of Etna, 117.
- Adiantum? *psychodes*, 54.
- Affpuddle Heath, Dorsetshire, natural pits on, 187.
- Africa, South, Mr. Thornton on some coal from, 556.
- , Prof. Huxley on some reptilian remains from, 555, 642.
- , Dr. Rubidge on some points in the geology of, 195.
- , Mr. Stowe on some fossils from, 193.
- America, British, lower coal-measures of, 62.
- Ammonites alligatus*, 9.
- *Arduennensis*?, 10.
- *Athleta*, 7, 10.
- *Baugieri*, 12.
- *binatus*, 10.
- *bipartitus*, 12.
- *conterminus*, 12.
- *Chamusseti*, 11.
- *Chauvinianus*, 9.
- *flexicostatus*, 11.
- *funiferus*, 11.
- *gemmatus*, 10.
- *glabellus*, 12.
- *Gowerianus*, 9.
- *gregarius*?, 11.
- *Gulielmi*, 10.
- *hyperbolicus*, 12.
- *Koenigi*, 10.
- *Lamberti*, 11.
- *Lunula*, 11.
- *Murrayanus*, 10.
- *ordinarius*, 8.
- *placenta*, 10.
- Ammonites Poculum*, 9.
- *putealis*, 11.
- *reversus*, 9.
- *rugosus*, 9.
- *sublævis*, 8.
- *turgidus*, 11.
- *Vertumnus*, 9.
- Amphibian remains, Prof. Huxley on some, 642.
- Amphipod, Mr. C. S. Bate on a new species of, 139.
- Andalusia, Prof. Ansted on the geology of a part of, 585.
- Annelida* from Durness, 380.
- of the lower coal-measures, 74.
- Annélide-markings, Nova Scotia, 74.
- Anniversary Address of the President, J. Phillips, Esq., xxiii-lxi. *See also* Phillips, J., Esq.
- Annual Report, i.
- Ansted, D. T., on the geology of Malaga and the southern part of Andalusia, 585.
- Arenicolites*, 381.
- Arksut, veins of tin-ore at, 606.
- Asaphus* from Ottawa, 555.
- Aspidium*?, 54.
- Aspidium Lyellii*, 53.
- Assynt, palæozoic rocks of, 366.
- Astarte elevata*, 136.
- Atherfield, new species of crustacean from, 237.
- Auriferous gullies of Ballaarat, 501.
- Austen, H. H. Godwin-, on the lacustrine or Karéwah deposits of Kashmir, 128, 221.
- Australia, reptilian remains from, 642.
- , skull of *Nototherium* from, 168.
- Australian fossils in the museum of the Nat. Hist. Soc. Worcester, 176.

INDEX TO THE PROCEEDINGS.

- Avisford Bridge, section of the sand-pit near, 216.
 — Dell, section across, 217.
 Award of the balance of the Donation-fund, xxiv.
 — of the Wollaston Medal, xxiii.
 Ayrshire, Mr. J. C. Moore on a protrusion of Silurian rock in the north of, 1.
Balanus Chisleianus, 136.
 Ballaarat, Mr. Rosales on the gold-field of, 502.
 Banffshire, the Old Red Sandstone of, 336.
 Basalt, Mr. W. Hawkes on the melting and cooling of, 105.
 Bate, C. S., on the fossil crustacean found in the magnesian limestone of Durham by Mr. J. Kirkby, and on a new species of amphipod, 137.
 Beach of Brighton, Mr. Prestwich on the westward extension of the old raised, 215.
 Beckles, S. H., on fossil foot-prints in the sandstone at Cummington, 461.
 Bewdley, fossil fern from, 80.
 Bigsby, J. J., on the fossils and strata of the palæozoic basin of New York, Part III., 86, 251.
 Binney, E. W., notice of lias deposits at Quarry-Gill and other places near Carlisle, 549; observations on *Stigmariaria ficoides* by, 76.
 Birdseye limestone, fossils of the, 282.
 Black mica of the granite of Leinster and Donegal, 129.
 Bones of the Stagonolepis, 452.
Bothriceps Australis, 647.
 Bourbon, volcano of, 527, 542.
 Brighton, Mr. Prestwich on the westward extension of the old raised sea-beach of, 215.
 British North America, Dr. Dawson on the lower coal-measures in, 62.
 Brown, John, and G. B. Sowerby on the occurrence of some tertiary fossils at Grove Ferry, Kent, 133.
 Brown, Rev. Thomas, on a section of the Fifeshire coast, 50.
 Brownstone of Cork, jointings in the, 87.
Buccinum concinnum, 136.
 Bunbury, C. J. F., on some vegetable remains from Madeira, 50.
 Burgh Head, sandstone of, 430.
 Caithness flagstones, Sir R. Murchison on the, 400.
 — flags and upper Old Red Sandstone in the neighbourhood of Dunnet Head, 409.
 Caithness, fossil plant-remains from the Old Red Sandstone of, 407.
 Calcareous sandstone, fossils of the, 280.
 Cambrian rocks of Sutherland and Ross, 359.
 Canaan Hills, glacial phenomena in the, 206.
 Canada, Prof. A. C. Ramsay on some of the glacial phenomena of, during the Drift period, 200.
 —, Dr. J. W. Dawson on fossil plants from the Devonian rocks of, 478.
 Cape Wrath, gneiss of, 360.
 Capo di Miseno, near Naples, 521.
 Carbonaceous rocks of Dartmoor, granite-veins in the, 191.
 Carboniferous and Devonian rocks near Cork, jointings of the, 86.
 — rocks of British America, 62.
 — rocks of the Fifeshire coast, 61.
Cardium Crawfordii, 14.
 — *cognatum*, 14.
 Carlisle, Mr. E. W. Binney on some lias deposits at Quarry-Gill, near, 549.
 Castle-Hill, Scarborough, fossils of, 5.
 Catskill Falls, section of the valley below the, 210; Mountains, glacial phenomena in the, 207.
Caulopteris ? Peachii, 408.
 Cephalaspis *Asterolepis*, 503.
 —, Mr. J. Harley on two species of, 503.
 — *Salweyi*, 504.
Cerithium abbreviatum, 13.
 — *Culleni*, 13.
 Chalk, Mr. Wetherell on the structure of some of the siliceous nodules of the, 193.
 Chazy or Black-River limestone, fossils of the, 281.
 Chemical geology, Mr. T. S. Hunt on some points in, 488.
Chemnitzia lineata, 13.
 Chislet, tertiary fossils from near, 134.
Chiton ? cordatus, 616.
 — *Howseanus*, 615.
 — *Loftusianus*, 611.
Chitonellus antiquus, 619.
 — *distortus*, 623.
 — *Hancockianus*, 621.
 Chitonidæ, Mr. Kirkby on the Permian, 607.
 Clashan quarries, section across the coast ridge at, 429.
 Cleavage and lamination of rocks, 84.
 Clinton rocks, fossils of the, 283.
 Coal, Dr. Dawson on the vegetable structures in, 626.

INDEX TO THE PROCEEDINGS.

- Coal found at Tete, South Africa, Mr. R. Thornton on the, 556.
- Coal-measures in British North America, Dr. Dawson on the lower, 62.
- of Worcestershire, Mr. Morris on a species of fern from, 80.
- Colesberg, South Africa, *Dicynodon Murrayi* from, 555.
- Colonies of fossil species, Dr. Bigsby on, 291.
- Committee, Report of the Library and Museum, iii.
- Comparison of the palæozoic basins of Wales and New York, 292.
- Concentric craters, Mr. Scrope on, 541.
- Cone of eruption, natural section of a, 520.
- Cones, Mr. Scrope on volcanic, 505.
- Conglomerate (Cambrian) of Sutherland and Ross, 362.
- Conocephalus antiquatus*, 554.
- Consolidation of lava on steep slopes, 525.
- Copper, native, at Llandudno mine, 109.
- Cork, on the jointings and dolomites near, 86.
- Corylus Australis*, 55.
- Crag, nodules from the, 30.
- Craters, Mr. Scrope on the formation of, 505, 535.
- Creswick Creek, Mr. Rosales on the gold-field of, 501.
- Crocodylia, recent and fossil, Prof. Huxley on the scutes of, 445.
- Crocodylus Hastingsiæ*, Prof. Huxley on the dermal armour of, 678.
- Cromarty, section at the North Sutor of, 352.
- Cryptogamous plants, tissues of, in coal, 628.
- Crystalline rocks of the Highlands, 387; near Elgin, 424; of the Shetland Isles, 391; Mr. T. S. Hunt on the formation of, 490.
- Cucullæa minima*, 13.
- *clathrata*, 13.
- Cummingstone, Sir R. Murchison on the sandstone of, 429.
- Cummingstone sandstones, Mr. S. H. Beckles on fossil footprints in the, 461; Prof. T. H. Huxley on fossil footmarks in the, 440.
- Cyperus?, 54.
- Dartmoor, notice of an earthquake along the northern edge of the granite of, by Mr. G. W. Ormerod, 188.
- , Mr. G. W. Ormerod on some veins of granite in the carbonaceous rocks on the north and east of, 191.
- Dartmoor, Mr. G. W. Ormerod on rock-basins in the granite of, 16.
- Darwin, Charles, Esq., award of the Wollaston Medal to, xxiii.
- Dasyceps Bucklandi*, 647.
- Davallia Canariensis*, 53.
- Dawson, J. W., on the lower coal-measures in British North America, 62; on fossil plants from the Devonian rocks of Canada, 478; on the vegetable structures in coal, 626.
- Dentalium*, sp., 135.
- Dermal armour of Crocodiles, 678; scutes of Teleosauria, 448; of fossil Crocodylia, 447; of the *Stagonolepis*, 441; of recent Crocodylia, 445.
- Devonian and Carboniferous rocks near Cork, jointings of the, 86.
- rocks of Canada, animal remains in the, 487.
- plant-remains from Canada, 478.
- rocks, Sir R. I. Murchison on the, 414.
- Dictyopteris, 81.
- Dicynodon Murrayi*, 555, 649.
- Dicynodonts*, Prof. Huxley on the structure of the skull in the, 654.
- Diffusion of species, 285.
- Diprotodon australis*, 177.
- Distribution of the species of *Eurypterus*, 235.
- Divergence of species, 266.
- Dolomites near Cork, 100.
- Dolomitic conditions of the carboniferous limestone near Cork, 102.
- Dolomitization, causes of, 103.
- Donations to the Library, viii, 141, 239, 462, 537.
- to the Museum, vii.
- Donegal and Leinster, the black mica of the granite of, 129.
- Dorchester, natural pits on the heaths near, 187.
- Dorsetshire, some natural pits on Affpuddle Heath and Piddletown Heath, in, 187.
- Drift-deposits of Canada and the United States, 200.
- Drift-period in Canada, Prof. Ramsay on the, 200.
- Duff, Mr. P., on the fossils from near Elgin, 434.
- Dunnet Head, section of the Old Red Sandstone in the neighbourhood of, 509.
- Durham, Mr. C. S. Bate on a Permian *Prosoponiscus* from, 137.
- Durness Basin, section across the, 364; limestone, fossils of the, 374; section of the upper quartz-rock east of, 371; Silurian limestone of, 369.

INDEX TO THE PROCEEDINGS.

- Earthquake along the northern edge of the granite of the Dartmoor district, 180.
- Easdale and Oban, Prof. J. Nicol on the slate-rocks and trap-veins of, 110.
- Economic geology of the vicinity of Malaga, 603.
- Elevation-theory of volcanos, 506.
- Elgin, Dr. Malcolmson on the Old Red Sandstone at, 340; sandstones, the *Stagonolepis* of the, 440; section of the Old Red and the Yellow Sandstones at, 424.
- Erica arborea*, 56.
- Eruption-theory of volcanos, Mr. Srope on the, 507.
- Estheria Murchisoniana*, 404, 408.
- Etna, as seen from near Catania, 517; Dr. H. Abich on some points in the history and formation of, 117; view of the summit of, 526.
- Euomphalus (Maclurea) matutinus*, 379.
- Eurypterus abbreviatus*, 234.
- *acuminatus*, 233.
- *chartarius*, 234.
- ?, chelate termination of antenna? of, 235.
- *linearis*, 234.
- *megalops*, 233.
- , Mr. J. W. Salter on some new species of, 229.
- *pygmaeus*, 232.
- *Scouleri*?, 232.
- *Symondsii*, 230.
- Exmoor, the iron-ores of, 105.
- Falconer, H., on fossil mammalia from Malaga, 601.
- Fauna of the lower coal-measures, 71.
- Felspathic rocks, Mr. T. S. Hunt on, 494.
- Fern from the coal-measures of Worcestershire, Prof. Morris on a species of, 80.
- Fifeshire coast, details of a section of the, 61.
- Findhorn, the Old Red Sandstone of the, 341.
- Findrassic, sandstone of, 426.
- Fisher, O., on some natural pits on the heaths of Dorsetshire, 187.
- Fishes of the lower coal-measures, 72.
- Flint-nodules, Mr. Wetherell on some, 193.
- Flora of the lower coal-measures, 67.
- Foot-prints in the sandstone at Cummington, Mr. S. H. Beckles on the, 461; of the *Stagonolepis*, Prof. Huxley on the, 456.
- Foot-tracks, fossil, in the Elgin sandstones, 429, 440, 456, 461.
- Foraminifera, fossil, found near Malaga, 600.
- Fossil Annelide-tubes from the Stiper stones, 368.
- Fossil bird from New Zealand, 671; cetacean from New Zealand, 676; crustacean (bivalve) from the Caithness flagstone, 408; ferns which have a reticulate or anastomosing venation, table of the chief forms of, 83; footmarks in the Cummington sandstones, on the, 429, 440, 461; fruit found in the Wealden deposits in Swanage Bay, Isle of Purbeck, Prof. Phillips on a, 46; plants and crustacean from the Old Red Sandstone, 408; plants from the Devonian rocks of Canada, 478; plants from Madeira, 50; plant-remains from the Old Red Sandstone of Caithness, 407.
- Fossils from South Africa, Mr. G. W. Stow on some, 193; from near Elgin, 426, 434, 436, 440; of the Durness limestone, 374; of the Old Red Sandstone, 342; of the Kelloway rock, 7; tertiary, from Grove Ferry, Kent, 133; Dr. Bigsby on palaeozoic, in Wales and N. America, 257, 293; Mr. Wood on extraneous, in the Red Crag, 43.
- Fundamental gneiss of Sutherland and Ross, 359.
- Geology of Ballaarat, Mr. Rosales on the, 502; of Malaga and Andalusia, Prof. Ansted on the, 585; of Morayshire, Dr. Malcolmson on the, 336; of Morayshire, Sir R. I. Murchison on the, 422; of South Africa, Dr. Rubidge on some points in the, 195.
- Gibraltar Bay, section in, 595.
- Glacial phenomena of Canada and the north-eastern provinces of the United States during the Drift period, Prof. A. C. Ramsay on some of the, 200.
- Gneiss of Cape Wrath, 360, 580.
- Gneissose rocks east of Assynt, 382, 583.
- Godwin-Austen, H. H., on the lacustrine or Karéwah deposits of Kashmir, 221.
- Gold-fields of Ballaarat and Creswick Creek, Mr. Rosales on the, 497.
- Goodwood Sands, Mr. Prestwich on the, 215.
- Gould, C., description of a new fossil crustacean from the lower greensand of Atherfield, 140, 237.
- Graham Island, as it appeared in September 1831, 520.

INDEX TO THE PROCEEDINGS.

- Granite of Leinster and Donegal, Rev. S. Haughton on the lepidomelane in the, 129.
- of the Dartmoor district, Devonshire, Mr. G. W. Ormerod on the rock-basins in the, 16.
- Granite-veins in the carbonaceous rocks on the north and east of Dartmoor, 191.
- Graphularia Wetherellii in nodules from the London clay and the crag, Mr. T. N. Wetherell on the, 30.
- Greenland, veins of tin-ore at Arksut in, 606.
- Grotta del Subi Legno, 127.
- Grove Ferry, Kent, Mr. J. Brown and Mr. G. B. Sowerby on some tertiary fossils at, 133.
- Gymnospermous plants, tissue of, in coal, 630.
- Harkness, Robert, on the jointings in the Carboniferous and Devonian rocks near Cork, and on the dolomites of the same district, 86.
- Harley, J., description of two species of Cephalaspis by, 503.
- Haughton, S., on the black mica of the granite of Leinster and Donegal, 129.
- Hawkes, W., on the melting and cooling of basalt, 105.
- Hills, Mr., fossils discovered by, in the Goodwood Sands, 220.
- Hudson-River rocks, fossils of the, 282.
- Hunt, T. S., on some points in chemical geology, 488.
- Huxley, T. H., on a fossil bird and a fossil cetacean from New Zealand, 671; on a new species of Dicynodon from near Colesberg, South Africa, 555; on a new species of Dicynodon from near Colesberg, South Africa, 649; on Rhamphorhynchus Bucklandi, a Pterodactyle from the Stonesfield slate, 658; on some Amphibian and Reptilian remains from South Africa and Australia, 642; on the dermal armour of Crocodilus Hastingsiæ, 678; on the Stagonolepis Robertsoni (Agassiz) of the Elgin sandstones, and on the recently discovered footmarks in the sandstones of Cummingstone, 440.
- Hyperodapedon from the Elgin sandstones, 436.
- Ibex, fossil, found near Malaga, 597.
- Ilex Hartungii, 56.
- Increment and decrement of species, 283.
- Inverness-shire, Old Red Sandstone of, 336.
- Ireland, dolomites of South, 100; granites of a part of, 129; jointings of the rocks in South, 86.
- Iron-ores of Exmoor, Mr. W. Smyth on the, 105.
- Isle of Wight, new fossil crustacean from the, 237.
- Isocardia? clarissima, 14.
- Jamieson, T. F., on an outlier of lias in Aberdeenshire, 131.
- Jaw and teeth of the Stagonolepis, 454.
- Jhelum Valley, alluvial deposits of the, 221.
- Jointings in the Triassic rocks, 94; of the rocks near Cork, on the, 86.
- Jones, T. Rupert, on *Estheria Murchisoniana*, 404; on fossil Foraminifera from Malaga, 600.
- Jorullo and the Malpais, 509.
- Karéwah or lacustrine deposits of Kashmere, 221.
- Kashmere, Capt. Godwin-Austen on the lacustrine or Karéwah deposits of, 221.
- Kelloway rock, fossils of the, 7.
- of the Yorkshire coast, Mr. John Leckenby on the, 4.
- Kirkby, J. W., on the Permian Chitonidæ, 607.
- Knorrria in the Devonian rocks of Canada, 486.
- Koala (*Phascolarctos*), recent, 173.
- Lacustrine or Karéwah deposits of Kashmere, 221.
- Lamination and cleavage of rocks, Mr. G. P. Scrope on the, 84.
- Laurus Canariensis?, 54.
- Lava, consolidation of, on steep slopes, 525.
- Leckenby, J., on the Kelloway rock of the Yorkshire coast, 4.
- Leinster and Donegal, the black mica of the granite of, 129.
- Lepidodendra of the lower coal-measures, 68.
- Lepidodendron?*, 407.
- *corrugatum*, 68.
- *elegans*, 68.
- *Gaspianum*, 483.
- *nothum?*, 407.
- *Sternbergii*, 68.
- Lepidomelane of the granite of Leinster and Donegal, 129.
- Lethen Burn, the Old Red Sandstone of, 343.
- Lias at Quarry-Gill and other places near Carlisle, notice of, by Mr. E. W. Binney, 549; in Aberdeenshire, an outlier of, 131; and oolitic rocks of Scotland, 417.
- Library Committee, Report of the, iii.
- Limax*, sp., 135.

INDEX TO THE PROCEEDINGS.

- Limestone of Durness and Assynt, 369, 581.
- Limopsis aurita*, 134.
- Lingula-flags or Zone primordiale, Mr. J. W. Salter on the fossils of the, 351.
- Lipari Isles, Volcano and Volcanello in the, 542.
- Llandudno mine, Mr. W. Vivian on the native copper in the, 109.
- Lonchopterus, 80.
- Lossiemouth, section showing the position of the reptiliferous sandstone at, 428.
- Lower Silurian rocks of Durness, 366.
- Lycopodites Milleri*, 407.
- Lyell, Sir Charles, reply on receiving for Mr. Darwin the Wollaston Medal, xxiii.
- Maclurea Peachii*, 377.
- Madeira, Mr. C. J. F. Bunbury on some vegetable remains from, 50.
- Malaga, Prof. Ansted on the geology of, 585.
- Malcolmson, J. G., on the relations of the different parts of the Old Red Sandstone in which organic remains have recently been discovered, in the counties of Moray, Nairn, Banff, and Inverness, 336.
- Mamelon of Bourbon in eruption, 532.
- Mammalian remains found near Malaga, 602.
- Manatus Americanus* (recent), 170.
- Medina sandstone, fossils of the, 283.
- Metamorphic rocks of the Sierra Nevada, 587.
- Micropholis Stowii*, 642.
- Miller, John, on the succession of rocks in the Northern Highlands, 461, 578.
- Mineral charcoal, Dr. Dawson on, 627.
- Mineral springs near Tehran, Persia, 198.
- Minerals from Persia, the Hon. C. A. Murray on some, 605.
- Mithracites Vectensis*, 237.
- Montreal, the drift deposits at, 202.
- Moore, J. C., on a protrusion of Silurian rock in the north of Ayrshire, 1.
- Morayshire, Old Red Sandstone of, 336.
- Morris, J., on a species of fern from the coal-measures of Worcester-shire, 80.
- Mountain-limestone of the Fifeshire coast, 61.
- Mountains of the west coast of Sutherland and Ross, 362.
- Murchison, Sir R. L., reply on receiving, for the use of Mr. Charles Peach, the balance of the proceeds of the Wollaston Fund, xxiv; on the sandstones of Morayshire (Elgin, &c.) containing reptilian remains, and on their relations to the Old Red Sandstone of that country, 419; on the succession of the older rocks in the northernmost counties of Scotland, with some observations on the Orkney and Shetland Islands, 353.
- Murchisonia angulocincta*, 380, 418.
- *bellicincta*?, 380, 418.
- (*Hormotoma*) *gracilis*, var. *gracillima*, 379.
- Murray, C. A., on some minerals from Persia, 605; on some mineral springs near Tehran, Persia, 198.
- Museum Committee, Report of the, iii.
- Myrtus?, 56.
- Nairnshire, Old Red Sandstone of, 336.
- Native copper in Llandudno mine, North Wales, 109.
- Nephradium?, 53.
- Newer Red Sandstone of Scotland, 416.
- Newfoundland, Mr. Salter on a Trilobite from, 551.
- New York, Dr. J. J. Bigsby on the palæozoic basin of the State of, Part III., 251.
- New Zealand, Prof. Huxley on a fossil bird and a fossil cetacean from, 671.
- Niagara Falls, probable age of the, 212; section of the later tertiary beds near, 213; section of the freshwater beds above the gorge of the, 214.
- Nicol, James, on the slate-rocks and trap-veins of Easdale and Oban, 110.
- Nodules from the London clay, 30.
- North America, Mr. Salter on some Trilobites from, 551.
- North Devon, iron-ores of, 105.
- Northern Highlands, Mr. J. Miller on the succession of rocks in the, 461; Sir R. Murchison on the rocks of the, 353.
- Nototherium inerme*, 178.
- *Mitchelli*, 170, 181.
- Oban, slate-rocks and trap-veins of Easdale and, 110.
- Old Red Sandstone at Sarclet, near Wick, section of the, 396; fossil plants and crustacean from the, 408; Mr. Harley on two species of Cephalaspis from the, 503; in the counties of Moray, Nairn, Banff, and Inverness, Dr. Malcolmson on the, 336; in the neighbourhood of Dunnet Head, 409; of Caithness, fossil plant-remains from the, 407;

- of Morayshire, Sir R. I. Murchison on the, 419; of North Scotland, Mr. J. Miller on the, 584; of the North-east of Scotland, Sir R. I. Murchison on the, 393; of the Shetland Islands, Sir R. I. Murchison on the, 412; of the Orkney Isles, Sir R. I. Murchison on the, 410; series near Dirlet Castle, section of the, 397.
- Oncoceras*?, 377.
- Oolitic rocks of Scotland, 417.
- Ophileta compacta*, 378.
- Oreodaphne foetens, 55.
- Orkney and Shetland Islands, Sir R. I. Murchison on the geology of the, 353.
- Orkney Isles, the Old Red Sandstone of the, 350, 410.
- Ormerod, G. W., notice of the occurrence of an earthquake along the northern edge of the granite of the Dartmoor district on the 28th Sept. 1858, 188; on the rock-basins in the granite of the Dartmoor district, Devonshire, 16; on some veins of granite in the carbonaceous rocks on the north and east of Dartmoor, 191.
- Orthis striatula*, 380, 418.
- Orthoceras arcuoliratum, 374.
- *mendax*, 374.
- *undulostriatum*, 375.
- *vertebrale*, 375.
- Orthoceratida, diagram of some forms of Lower Silurian, 376.
- Outline-sketch of the hills above Kishtwar, 229.
- Owen, R., on a collection of Australian fossils in the Museum of the Natural History Society at Worcester, with descriptions of the lower jaw and teeth of the *Nototherium inerme* and *N. Mitchelli*, 176; on some outline-drawings and photographs of the skull of the *Zygomaturus trilobus*, Macleay (*Nototherium*, Owen?), 168.
- Palæodyptes antarcticus*, 671.
- Palæozoic basin of the State of New York, Dr. J. J. Bigsby on the, Part III., 251; life in Wales and North America, 257, 292; rocks of Sutherland, J. Miller on the, 578; of the Northern Highlands, Sir R. I. Murchison on the, 353; sediments, 253.
- Paradoxides Bennettii*, 552.
- Pariou, Monts de Dôme, ideal section of the double cone of, 546.
- Parker, W. K. on fossil Foraminifera from Malaga, 600.
- Patella*? *graphica*, 13.
- Peach, Charles, Esq., award of the residue of the Wollaston Fund to, xxiv.
- Peak of Teneriffe, 512.
- Perched block on the side of the Karéwah Hills, 224.
- Permian Chitonidæ, Mr. Kirkby on the, 607.
- *Prosoponiscus* from Durham, Mr. C. S. Bate on the, 137.
- Persia, the Hon. C. A. Murray and Mr. W. W. Smyth on some minerals from, 605; the Hon. C. A. Murray on some mineral springs in, 198.
- Phædra antiqua* (recent), 139.
- Phascolarctos fuscus* (recent), 173.
- Phillips, John, on a fossil fruit found in the upper part of the Wealden deposits in Swanage Bay, Isle of Purbeck, 46.
- Phillips, Prof. John (President), Address on presenting the Wollaston Medal to Sir C. Lyell for Charles Darwin, Esq., xxiii; address to Sir R. I. Murchison on giving him the residue of the Wollaston Fund for Mr. Charles Peach, xxiv; Anniversary Address, February 18, 1859, xxv; *Notices of deceased Fellows*: — Mr. Robert Brown, xxv; Mr. Herbert Francis Mackworth, xxvi; Mr. Hugh Lee Pattinson, xxvi; the Rev. Dr. George Peacock, xxvi; Mr. Henry Warburton, xxvi; review of geological progress, xxvii; Geological Survey and Maps, xxvii; Murchison's 'Siluria,' noticed, xxviii; H. D. Rogers's Report on the Geology of Pennsylvania, noticed, xxix; Nicol's Geological Map of Scotland, noticed, xxix; the new Edition of Greenough's Geological Map of England, xxx; observations on the constitution of rocks, xxxiii; on fossil plants, xxxvii; on fossil zoology, xxxix; on the Brixham Cave, xl; on iron-ores, xli; on the gold-fields of Australia, Vancouver's Island, &c., xliii; on geological theory, xlv; terrestrial physics, xlv; the internal heat of the earth, xlvi; condition of the earth and atmosphere in early times, xlvii; conduction of heat in the crust of the earth, xlviii; the thermal influence of water circulating through mines, xlix; convection of heat up the cracks and fissures of the earth, l; Daubrée's researches on zeolitic and other minerals generated by warm

INDEX TO THE PROCEEDINGS.

- springs, li; Deville's researches, li; Gages's researches, lii; Delesse on the metamorphism of rocks, lii; Sterry Hunt on the processes by which sedimentary deposits may have been transformed into crystalline rocks, liii; Scrope on the volcanos of Auvergne, liv; Abich on the structure of Etna, liv; Mallet and Perrey on earthquakes, lv; the granitic and metamorphic region of Dartmoor and the Land's End, lvii; Marshall on the granitic and metamorphic rocks in the Lake-district, lviii; Babbage, Siljeström, and Bischoff on alteration in rocks by heat and cooling, lx; conclusion, lxi.
- Phocanopsis Mantelli*, 676.
- Phyllites, 57.
- hymenæoids, 56.
- lobatula, 56.
- Piddletown Heath, Dorsetshire, natural pits on, 187.
- Pillar of lava in Tahiti, 527.
- Piloceras invaginatam*, 376.
- Pits (natural) on the heaths of Dorsetshire, 187.
- Pittosporum, 56.
- Plan of Jorullo and the Malpais, 510; and sections of the Kahmil valley, Kashmere, 226; of the terraces in the valley of the Kahmil, Kashmere, 225; of Volcano and Volcanello, 543.
- Pleurotomaria arenosa*, 12.
- *striata*?, 12.
- *Thule*, 379.
- Poacites in the Devonian rocks of Canada, 486.
- of the lower coal-measures, 70.
- Porten Cross, Silurian rocks at, 3.
- Potsdam sandstone, fossils of the, 279.
- Prestwich, J., on the pleistocene seabed of the Sussex coast, 86; on the westward extension of the old raised beach of Brighton, and the extent of the sea-bed of the same period, 215.
- Profile of the Puy de Grand Sarcouy, 527.
- Prosoponiscus problematicus*, 137.
- Prototaxites Logani*, 484.
- Psilophyton princeps*, 480.
- *robustus*, 481.
- Pteris aquilina, 53.
- Pterodactyle from the Stonesfield slate, Prof. Huxley on a, 658.
- Pyrula nodulifera*, 136.
- Quartz-rocks of Assynt, 366, 581.
- Rain-marks in the Devonian rocks of Canada, 488.
- Raised beaches near Malaga, 599.
- Ramsay, A. C., on some of the glacial phænomena of Canada and the north-eastern provinces of the United States during the drift-period, 84, 200.
- Recurrence of species, 269, 288.
- Red Crag, Mr. Wood on the extraneous fossils of the, 32.
- Relations of the Old Red Sandstone, Dr. Malcolmson on the, 536.
- Report, Annual, i.
- Report of the Library and Museum Committee, iii.
- Reptilian remains, Prof. Huxley on some, from Africa and Australia, 642; of the sandstones of Morayshire, 419.
- Reptiliferous sandstone at Lossiemouth, 428.
- Reticulate ferns, fossil, 83.
- Rhamporhynchus Bucklandi*, 658.
- *depressirostris*, 663.
- Rhinoceros, fossil, found near Malaga, 602.
- Rock-basins in the granite of the Dartmoor district, 16.
- Rocks, lamination and cleavage of, 84.
- Rosales, H., on the gold-fields of Ballarat and Creswick Creek, 497.
- Ross and Sutherland, Sir R. I. Murchison on the palæozoic rocks of, 353.
- Rubidge, R. N., on some points in the geology of South Africa, 195.
- Russia, Devonian rocks of, 415.
- Salix?, 55.
- Salter, J. W., description of the organic remains from the Durness limestone by, 374; on the fossils of the Lingula-flags or "Zone Primordiale," 351; on some new species of Eurypterus, with notes on the distribution of the species, 137, 229.
- Sandstone of Cape Wrath, Mr. J. Miller on the, 580; Sir R. I. Murchison on the, 362.
- Sandstones of Morayshire (Elgin, &c.) containing reptilian remains, 419.
- Sarsden, pterodactylian remains from, 658.
- Scarborough, Kelloway rock of, 4.
- Schizopteris?* of the lower coal-measures, 70.
- Scolithus linearis*, from the Stiper stones, 368.
- Scotland, Dr. Malcolmson on the Old Red Sandstone of, 336; jurassic rocks of, 417; Mr. J. Miller on the succession of rocks on the north coast of, 578; newer red sandstone

INDEX TO THE PROCEEDINGS.

- of, 416; Sir R. I. Murchison on the Old Red Sandstone of, 393, 419; the succession of the older rocks in the northernmost counties of, 353, 578.
- Scrope, G. P., on the lamination and cleavage of rocks, 84; on the mode of formation of volcanic cones and craters, 505.
- Scutes of *Crocodylia*, 445, 678; of *Stagonolepis*, 441; of *Teleosauria*, 448.
- Section across Avisford Dell, 217; across Assynt, 367; across the coast-ridge at Clashan, 429; across the Durness basin, 364; at the Tejares, near Malaga, 597; in Gibraltar Bay, 596; in the Arroyo Caleta, 598; of a simple volcanic cone, 520; of a cone formed of the products of repeated eruptions, 524; of Jorullo, 510; of the alluvium cut through by the torrent north-west of Kuttai, Kashmere, 222; on the bank of the Chandra-Bagha, Kashmere, 229; of the Caithness flags and the upper Old Red Sandstone in the neighbourhood of Dunnet Head, 409; of drift-deposits at Montreal, in Canada, 202; of the drift-terraces at Montreal, 204; of the double cone of Pariou, Monts de Dôme, 546; of the Fifeshire coast, Rev. T. Brown on the, 61; of the later tertiary beds near the Falls of the Niagara, 213; of the Mamelon Centrale, 531; of the Old Red series near Dirlet Castle, 397; of the Old Red Sandstone of the north-east of Scotland, 394; of the Old Red Sandstone at Sarclet, 396; of the Old Red Sandstone and the Yellow Sandstone at Elgin, 424; of the Puys de Sarcouy and Goule, Monts de Dôme, 531; of the quartz-rocks, limestones, and overlying gneissose rocks between Loch Eribol and Loch Tongue, 383; of the sand-pit north of Avisford Bridge, Sussex, 216; of Vesuvius and Somma, 544; on the south side of the North Sutor of Cromarty, 352; showing the general succession across the North Highlands, 360; showing the position of the freshwater beds above the gorge of the Niagara, 214; showing the position of the reptiliferous sandstone at Lossiemouth, 428; of the upper quartz-rock to the east of Durness, 371; of the valley below the Falls of Catskill, 210; of the valley of the Kahmil, Kashmere, 226.
- Sections near San Telmo, 593, 596; near Malaga, 589, 591, 593, 597; of the Old Red Sandstone of Morayshire and Banffshire, 336; of the Sierra de Gador, 588.
- Sedimentary and other external relations of the palæozoic fossils of the State of New York, Dr. Bigsby on the, 251.
- Sediments, conditions and characters of, 252.
- Serpulites Maccullochii*, 381, 418.
- Shetland and Orkney Islands, Sir R. I. Murchison on the geology of the, 353.
- Siliceous nodules of the chalk, Mr. Wetherell on the structure of some of the, 193.
- Silurian rocks of Durness, 366; in the north of Ayrshire, Mr. J. C. Moore on a protrusion of, 1.
- Sketch-map of a portion of the Catskill Mountains on the west side of the Hudson, 209.
- Sketch-plans of the alluvium in the Jhelum Valley, Kashmere, 222, 223.
- Skull of the *Dicynodonts*, Prof. Huxley on the, 654.
- Slate-rocks and trap-veins of Easdale and Oban, Prof. James Nicol on the, 110.
- Smyth, W. W., on some minerals from Persia, 605; on the iron-ores of Exmoor, 105.
- Solemya Woodwardiana*, 14.
- South Africa, Mr. G. W. Stow on some fossils from, 193; Dr. R. N. Rubidge on some points in the geology of, 195; Mr. R. Thornton on coal found at Tete, in, 556; Prof. Huxley on a new species of *Dicynodon* from, 555; on some reptilian remains from, 642.
- Sowerby, G. B., description of the species of some tertiary fossils from Grove Ferry, Kent, 136.
- Spain, Prof. Ansted on the geology of a part of southern, 585.
- Spynie, sandstone of, 426.
- Stagonolepis Robertsoni* of the Elgin sandstones, Prof. T. H. Huxley on the, 440; Sir R. I. Murchison on the geological place of the, 432.
- Steep slopes, lava on, 525.
- Stigmæria ficoides*, some observations on, by Mr. E. W. Binney, 76.
- Stonesfield slate, *Rhamphorhynchus* from the, 658.

INDEX TO THE PROCEEDINGS.

- Stow, G. W., on some fossils from South Africa, 193.
- Succession of the older rocks in the northernmost counties of Scotland, Sir R. I. Murchison on the, 353; Mr. Miller on the, 578.
- Summit of Etna, 526; of Vesuvius in 1774 and in 1777, 543; of one of the Mamelons of Bourbon in eruption, 532.
- Sutherland and Ross, palæozoic rocks of, 361.
- Swanage Bay, fossil fruit found in the Wealden deposits in, 46.
- Table of the recurrent or non-typical fossils of the Silurian system of New York, 271; of the sedimentary habitats of the Silurian fauna and flora of the State of New York, 259; of the sedimentary habitats of the Silurian fauna and flora of Wales and the adjacent English counties, 260; of beds into which the Silurian fossils of Wales diverge from their first or original habitat, 267; of the recurrent fossils common to New York and Wales, 274; of the typical and recurrent fossils of Wales, 272; of the divergents of Wales and of New York, 269; of the Silurian and Devonian fossils of the State of New York, exhibiting their sequence, grouping, increment and decrement, 294; of analyses of some European palæozoic strata, 254; of analyses of some rocks from Canada, 254; of extraneous fossils found in the Red Crag, 43; of the increment and decrement of fossils, 284; of Silurian species in Wales and New York, 273; of species-life in the sedimentary habitats in New York and Wales, 265; of species-life in calcareous or non-calcareous habitats in New York and Wales, 264; of tors and rock-basins in the district of Dartmoor, 24; of the fossil ferns which have a reticulate venation, 83; of the Silurian fossils of Wales and the adjacent English counties, arranged according to their mineral habitats, 315; of the Silurian and Devonian fossils of New York, showing their sequence, increment and decrement, 294; of the Silurian fossils of the State of New York in their different sedimentary habitats, 295; of recurrent Silurian species, 270; of the palæozoic sediments of Wales and the adjacent counties, 254; of the sedimentary constituents of the groups of strata in the New York basin, 254; of the lower coal-measures of British America, 6.
- Tables of the Old Red or Devonian rocks and fossils, 437, 438, 439.
- Tahiti, pillar of lava in, 527.
- Tapirus Americanus* (recent), 171.
- Taylor, J. W., on the veins of tin-ore at Evigtok, near Arksut, Greenland, 606.
- Tejares clay, fossils of the, 601.
- Teleosauria, scutes of, 447.
- Telerpeton, geological place of the, 432.
- Teneriffe, peak of, 510.
- Tertiary deposits near Málaga, 595; fossils at Grove Ferry, Kent, 133.
- Tete, coal found at, 556.
- Thornton, R., on the coal found by Dr. Livingstone at Tet, on the Zambesi, South Africa, 516.
- Tin-ore, Mr. Taylor on the veins of, at Arksut, 606.
- Toronto, section of the drift-terraces at, 204.
- Tors and rock-basins in the district of Dartmoor, table of, 24.
- Trap-veins and slate-rocks of Easdale and Oban, 110.
- Trenton limestone, fossils of the, 282.
- Trilobites from North America, Mr. Salter on some, 551.
- Tynat and Buckie, the Old Red Sandstone of, 346.
- Unicardium sulcatum*, 14.
- United States, Dr. Bigsby on palæozoic life in, 257; Prof. Ramsay on the drift-period in the north-eastern, 200.
- Upheaval-theory of volcanic cones, 506.
- Up Street, Kent, tertiary fossils from, 134.
- Utica slate, fossils of the, 282.
- Vaccinium Maderense, 56.
- Myrtillus, 56.
- Vegetable remains from Madeira, 50; structures in coal, 626.
- Veins of tin-ore at Arksut, Mr. Taylor on the, 606.
- Ventral scutes of Teleosauria, 449.
- Verneuil, E. de, on fossil shells from Malaga, 601.
- Vesuvius and Somma, ideal section of, 544; from near Sorrento, 542; summit of, in 1774, 543; summit of, in 1777, 543.
- Vivian, W., on arborescent native copper in the Llandudno mine near Great Ormshead, North Wales, 109.

INDEX TO THE PROCEEDINGS.

- Volcanic cones, ideal sections of, 520, 524.
 ——— and craters, Mr. G. P. Scrope on the mode of formation of, 505.
 Volcanic rocks, Mr. T. S. Hunt on, 491.
 Volcano and Volcanello, Lipari Isles, 542.
 Volcano of Bourbon, 527, 542.
 Wales and N. America, palæozoic life in, 257, 292.
 Waterbeach Sand-pit, section of, 218.
 Wealden, a fossil fruit from the, 46.
 Wetherell, N. T., on *Graphularia Wetherellii* in nodules from the London Clay and the Crag, 30; on the structure of some of the siliceous nodules of the Chalk, 193.
 Wood, S. V., on the extraneous fossils of the Red Crag, 32.
 Woodwardia radicans, 53.
Woodwardites? Robertsi, 82.
 Worcestershire, fossil fern from, 80.
 Yellow sandstone, jointings of the, 87.
 Zone primordiale, Mr. J. W. Salter on the fossils of the, 551.
Zygomaturus trilobus, 168.

END OF THE FIFTEENTH VOLUME.