

---

## References

### General geology

Principles of Physical Geology (third edition revised by Doris L. Holmes). A. Holmes. 1978. 730 pp. Van Nostrand Reinhold (UK).

The Cambridge Encyclopaedia of Earth Sciences. D.C. Smith (Editor). 1981. 496 pp. Cambridge University Press.

A Dynamic Stratigraphy of the British Isles. R. Anderton, P.H. Bridges, M.R. Leeder and B.W. Sellwood. 1979. 301 pp. George Allen & Unwin.

Sedimentology: Process and Product. M.R. Leeder. 1982. 344pp. George Allen & Unwin.

Sedimentary Environments and Facies. H.G. Reading (Editor). 1978. 569 pp. Blackwell.

Ancient Sedimentary Environments. R.C. Selly. 1970. 237 pp. Chapman and Hall.

Volcanoes. P. Francis. 1978. 368 pp. Penguin. Guide to the practical study of crystals, minerals and rocks (revised first edition). K.G. Cox, N.B. Price and B. Harte. 1972. 245 pp. McGraw Hill. The Country Life Guide to Minerals, Rocks and Fossils. W.R. Hamilton, A.R. Wooley and A.C. Bishop. 1974. 280 pp. Country Life.

Invertebrate palaeontology and evolution (third edition). E.N.K. Clarkson. 1992. 424pp Chapman & Hall.

Atlas of Invertebrate Macrofossils. J.W. Murray (Editor). 1985. 241 pp. Longman / The Palaeontological Association.

### British Museum Handbooks. British Museum (Natural History). H.M.S.O.

British Caenozoic Fossils (fifth edition). 1975. 132pp.

British Mesozoic Fossils (sixth edition). 1983. 209pp.

British Palaeozoic Fossils (fourth edition). 1975. 203pp.

### Geological Museum Booklets. British Geological Survey. H.M.S.O.

Britain before Man. F.W. Dunning et al. 1978. 36 pp.

British Fossils. J. Thackray. 1984. 36 pp.

Earthquakes. S.Van Rose. 1983. 36 pp.

The Age of the Earth. J. Thackray. 1980. 36 pp.

The Geological Map: an anatomy of a Landscape. E. Edmonds. 1984. 36 pp. The Origin and Evolution of Coal. P. J. Adams. 1983 16 pp.

The Story of the Earth (second edition). F.W. Dunning et al. 1981. 36 pp. Volcanoes (second edition). S. Van Rose and I. Mercer. 1991.60 pp.

### Borders geology

Geology and Scenery in Scotland. J.B. Whittow. 1977. 362 pp. Penguin.

Lothian Geology – An Excursion Guide. A.D. McAdam and E.N.K. Clarkson (Editors). 1986. 221 pp. Scottish Academic Press.

The Geology of Scotland (third edition). G.Y. Craig (Editor). 1991. 472 pp. Scottish Academic Press.

The South of Scotland (third edition), British Regional Geology. D.C. Greig. 1971. 125 pp. British Geological Survey . H.M.S.O.

Northern England (fourth edition), British Regional Geology. B.J. Taylor et al. 1971. 125pp. British Geological Survey. H.M.S.O.

### Text references

Armstrong, H.A., Clarkson, E.N.K. and Owen, A.W. 1990. A new Lower Ordovician conodont faunule from the Northern Belt of the Southern Uplands. Scott. J.Geol. 26, 47–52.

Barnes, R.P., Lintern, B.C. and Stone, P. 1989. Timing and regional implications of deformation in the Southern Uplands of Scotland. J. Geol. Soc. Lond. 146, 905–908.

Barron, T.1896. On a new British Rock containing Nepheline and Riebeckite. Geol. Mag. 3, 371–378.

Batchelor, R. and Weir, J.A. 1988. Metabentonite geochemistry: magmatic cycles and graptolite extinctions at Dob's Linn, southern Scotland. Trans. R. Soc. Edinb: Earth Sci. 79, 19–41.

Benton, M.J.1982. Trace fossils from Lower Palaeozoic ocean-floor sediments of the Southern Uplands of Scotland. Trans. R. Soc. Edinb:Earth Sci. 73, 6787.

Benton, M.J. and Trewin, N.H. 1980. Dictyodora from the Silurian of Peeblesshire, Scotland. Palaeontology 23, 501–13.

Bergström, S.M. 1971. Conodont biostratigraphy of the Middle and Upper Ordovician of Europe and Eastern North America. In: Sweet, W.C. and Bergström, S.M:(Editors). Symposium on Conodont biostratigraphy, Geol. Soc. Amer. Mem. 127, 83–157.

Bluck, B.J. 1985. The Scottish paratactonic Caledonides. Scott. J. Geol. 21, 437–64.

Brand, P.J. 1991. Faunal content of localities to be examined during an excursion on the Whiteadder Water area. Brit. Geol. Sure. Technical Report WH/91/19R.

Brown, R. 1891. The mines and minerals of Leadhills. Trans. Dumfr. & Gall. Nat. Hist. Soc. 6, 24.

Brown, R. 1925. More about the mines and minerals of Wanlockhead and Leadhills. Trans. Dumfr. & Gall. Nat Hist. Soc. 13, 58.

Cater, J.M.L., Briggs, D.E.G. and Clarkson, E.N.K. 1989. Shrimp-bearing sedimentary successions in the Lower Carboniferous (Dinantian) Cementstone and Oil Shale Groups of northern Britain. Trans. R. Soc. Edinb: Earth Sci. 80, 5–15.

Chadwick, R.A. and Holliday, D.W. 1991. Deep crustal structure and Carboniferous basin development within the Iapetus convergence zone of northern England. J. Geol. Soc. Lond.148, 41–53.

Clarkson, E.N.K. and Tripp, R.P. 1982. The Ordovician Trilobite *Calyptaulax bronniartii* (Portlock). Trans. Roy. Soc. Edinb: Earth Sci. 72, 287–94.

Clarkson, E.N.K., Harper, D.A.T., Owen. A.W. and Taylor, C.M. 1992 Faunas in Ordovician mass-flow deposits in Southern Scotland. Terra Nova. 4. 245- 253.

- Craig, G.Y. and Duff, P. Mc L. D. 1975. The Geology of the Lothians and South East Scotland: An Excursion Guide. Scottish Academic Press. 204 pp.
- Curie, J. 1937. Some Notes Upon the Abbey of Melrose. Berwickshire Nat. Hist. Club. 39, 51.
- Dearman, W.R., Shiells, K.A.G., and Larwood, G.P. 1962. Refolded folds in the Silurian rocks of Eyemouth, Berwickshire. Proc. Yorks. Geol. Soc. 33, 373–268.
- Douglas, F. 1971. Gold at Wolf's Crag? Oliver and Boyd, Edinburgh. Dzulynski, S. and Walton, E.K. 1965. Sedimentary features of flysch and greywackes. Developments in sedimentology 7, Elsevier, Amsterdam, 274pp.
- Eckford, R.J.A. 1952. Glacial phenomena in the West Linton–Dolphinton region. Trans. Edinb. Geol. Soc. 15, 133–149.
- Eckford, R.J.A. and Anderson, F.W. 1940. Report on the Building-Stones used in the construction of the Abbey of St Mary at Melrose. Berwickshire Nat. Hist. Club. 30, 178–182.
- Eckford, R.J.A. and Manson, W. 1928. Note on a Xenolith in Riebeckite-trachyte, Mid Eildon, Roxburghshire. Trans. Edinb. Geol. Soc. 12, 143–146
- Eckford, R.J.A. and Ritchie, M. 1931. The lavas of Tweeddale and their position in the Caradocian sequence. Summ. prog. Geol. Surv. Gt. Britain for 1930, 46–57.
- Elders, C.F. 1987. The provenance of granite boulders in conglomerates of the Northern and Central Belts of the Southern Uplands of Scotland. I. Geol. Soc. Lond. 144, 853–63.
- Evans, J.A., Stone, P. and Floyd, J.D. 1991. Isotopic characteristics of Ordovician greywacke provenance in the Southern Uplands of Scotland. In Morton, A.C., Todd, S.P. and Haughton, P.D.W. (Editors). Developments in Sedimentary Provenance Studies. Geol. Soc. Lond. Spec. Pub. 57, 161–172.
- Floyd, J. 1982. Stratigraphy of a flysch succession: the Ordovician of W Nithsdale, SW Scotland. Trans. R. Soc. Edinb: Earth Sci. 73, 1–9.
- Floyd, J. and Trench, A. 1989. Magnetic susceptibility contrasts in Ordovician greywackes of the Southern Uplands of Scotland. J. Geol. Soc. Lond. 146, 7783.
- Fowler, A. 1926. The geology of Berwick-upon-Tweed, Norham and Scremerston. Mem. Geol. Surv. England.
- Frost, D.V. 1969. The Lower Limestone Group (Visean) of the Otterburn district, Northumberland. Proc. Yorks. Geol. Soc. 37, 277–309.
- Geikie, A. 1864. The Geology of Eastern Berwickshire. Mem. Geol. Surv. Scot.
- Geikie, A. 1871. On the order of succession among the Silurian rocks of Scotland. Trans. Edinb. Geol. Soc. 3, 74–95.
- Geikie, J. 1897. Geology and Petrology of St Abb's Head. Proc. R. Soc. Edinb. 14, 177–193.
- Gillanders, R.J. 1981. Famous mineral localities: The Leadhills–Wanlockhead District, Scotland. Mineral Record. Jul-Aug. 1981, 235–242.
- Gordon, A.J. 1962. The Lower Palaeozoic Rocks around Clenluce, Wigtonshire. Ph.D. Thesis, University of Edinburgh (unpublished.).
- Green, D.I. 1987. The Minerals of Meadowfoot Smelter. Rock Bottom 2, 3–9.
- Green, D.I. 1990. Veszelyite. A mineral new to Britain, from Wanlockhead, Scotland, U.K. Mines and Minerals 2, 6–7.

Greig, D.C. 1988. Geology of the Eyemouth district. Mem. Brit. Geol. Surv. Hutton, J. 1795. Theory of the Earth. William Creech, Edinburgh.

Harland, W.B., Armstrong, R.L., Cox, A.V., Craig, L.E., Smith, A.G. and Smith, D.G. 1989. A geologic time scale. Cambridge. 263pp.

Hutton, D.H.W. and Murphy, F.C. 1987. The Silurian of the Southern Uplands and Ireland as a successor basin to the end-Ordovician closure of Iapetus. *J. Geol. Soc. Lond.* 144, 765–772.

Jackson, B. 1990. Queiteite, a first Scottish occurrence. *Scott. J. Geol.* 26, 57–58.

Kassi, A. 1984. Lower Palaeozoic geology of the Gala area, Borders Region, Scotland. Ph.D. Thesis, St. Andrews University (unpublished).

Lambert, R. St J., Holland, J.G. and Leggett, J.K. 1981. Petrology and tectonic setting of some Ordovician volcanic rocks from the Southern Uplands of Scotland. *J. Geol. Soc. Lond.* 138, 421–436.

Lamont, A. and Lindstrom, M. 1957. Arenigian and Llandeilian cherts identified in the Southern Uplands of Scotland by means of conodonts etc. *Trans. Edinb. Geol. Soc.* 17, 60–70.

Lapworth, C. 1870. On the Lower Silurian rocks of Galashiels. *Geol. Mag.* 7, 204–9, 279–84.

Lapworth, C. 1878. The Moffat Series. *Quart. J. Geol. Soc. Lond.* 34, 240–346.

Lapworth, C. and Wilson, J. 1870. The Lower Silurian rocks in the neighbourhood of Galashiels. *Trans. Edinb. Geol. Soc.* 2, 46–48.

Leggett, J.K. 1980. Palaeogeographic setting of the Wrae Limestone: an Ordovician submarine-slide deposit in Tweeddale. *Scott. J. Geol.* 16, 91–104

Leggett, J.K., McKerrow, W.S. and Eales, M.H. 1979. The Southern Uplands of Scotland: A Lower Palaeozoic accretionary prism. *J. Geol. Soc. Lond.* 136, 755–70.

Leggett, J.K. 1980. The Noblehouse area. Field guide to the Lower Palaeozoic geology of the Southern Uplands of Scotland. Imperial College, London (unpublished).

Livingstone, A. and Sarp, H. 1984. Macphersonite, a new mineral from Leadhills, Scotland, and Saint-Prix, France- a polymorph of leadhillite and susannite. *Mineral. Mag.* 48, 277–82.

MacGregor, A.G. and Eckford, R.J.A. 1948. The Upper Old Red and Lower Carboniferous Sediments of Teviotdale and Tweedside, and the Stones of the Abbeys of the Scottish Borderland. *Trans. Edinb. Geol. Soc.* 14, 230–250.

Mackay, R.A. 1959. The Leadhills-Wanlockhead Mining District. Symposium on the future of Non-ferrous Mining in Great Britain and Ireland. Instit. MM. Metal. London.

McAdam, A.D. 1977. Sand and gravel resources of the Borders Region of Scotland. *Rep. Inst. Geol. Sci.* 77/19.

McCall, J. and Goodlet, G.A. 1951. Indicator stones from the drift of south Midlothian and Peebles. *Trans. Edinb. Geol. Soc.* 14, 401–409

McKerrow, W.S. 1987. The Southern Uplands Controversy. *J. Geol. Soc. Lond.* 218 144, 735–6.

McKerrow, W.S. and Elders, C.F. 1989. Movements on the Southern Upland Fault. *I. Geol. Soc. Lond.* 146, 393–5.

McKerrow, W.S., Leggett, J.K. and Eales, M.H. 1977. Imbricate thrust model for the Southern Uplands of Scotland. *Nature* 267, 237–9.

- McMillan, A.A., Laxton, J.L. and Shaw, A.J. 1981. The sand and gravel resources of the country around Dolphinton, Strathclyde Region, and West Linton, Borders Region: Mineral Assessment Rept. Inst. Geol. Sci. 62.
- McRobert, (Lady) Rachel W. 1914. Acid and Intermediate Intrusions and Associated Ash-Necks in the Neighbourhood of Melrose (Roxburghshire). *Quart. J. Geol. Soc. Land.* 70, 303–315.
- Merriman, R.J. and Roberts, B. 1990. Metabentonites in the Moffat Shale Group; Southern Uplands of Scotland; geochemical evidence of ensialic marginal basin volcanism. *Geol. Mag.* 127, 259–271.
- Mitchell, W.I. 1977. The Ordovician Brachiopoda from Pomeroy., Co. Tyrone. *Palaeontogr. Soc. Monogr.*
- Molyneux, S.C. 1987. Probable early Wenlock acritarchs from the Linkirk Beds of the Southern Uplands. *Scott. J. Geol.* 23, 301–313.
- Mould, D.D.C.P. 1947. The Broadlaw 'granite'. *Geol. Mag.* 84, 178–80.
- Mutti, E. and Ricchi-Lucchi, F. 1975. Turbidite facies and fades associations from selected formations of the northern Appenines. IX Congr. Sedim, Nice, Field Trip A-II, 21–36.
- Nicol, J. 1848. On the geology of the Silurian rocks in the valley of the Tweed. *Quart. J. Geol. Soc. Lond.* 4, 195–209.
- Nicol, J. 1850. Observations on the Silurian strata of the south east of Scotland. *Quart. Geol. Soc. Lond.* 6, 53–65.
- Oliver, G.J.H., Smellie, J.L., Thomas, L.J., Casey, D.M., Kemp, A.E.S., Evans, L.J., Baldwin, J.R. and Hepworth, B.C. 1984. Early Palaeozoic metamorphic history of the Midland Valley, Southern Uplands, Longford-Down massif, and the Lake District, British Isles. *Trans. R. Soc. Edinb: Earth Sci.* 75, 245–258.
- Owen, A.W. and Clarkson, E.N.K. 1992. Trilobites from Kilbucho and Wallace's Cast, and the location of the Northern Belt of the Southern Uplands during the late Ordovician. *Scott. J. Geol.* 28, 3–17.
- Peach, B.N. 1908. A monograph on the higher Crustacea of the Carboniferous rocks of Scotland. *Mem. Geol. Surv. G.B.*
- Peach, B.N. and Horne, J. 1899. The Silurian rocks of Britain, 1, Scotland. *Mem. Geol. Surv. U.K.*
- Playfair, J. 1805. Biographical Account of the late Dr James Hutton. *Trans. R. Soc. Edinb.* 5, 39–99.
- Porteous, J.M. 1876. God's Treasure-house in Scotland. A history of times, mines and lands in the Southern Highlands. London.
- Price, R.J. 1973. Glacial and Flavioglacial Landforms. Oliver and Boyd, Edinburgh.
- Richardson, J., Tabrahani, C.J. and Breeze, D.J. (Editors). Dryburgh Abbey (Guidebook) H.M.S.O., Edinburgh, 1985.
- Ritchie, M. and Eckford, R.J.A. 1936. The 'Haggis Rock' of the Southern Uplands. *Trans. Edinb. Geol. Soc.* 13, 371–377.
- Rock, N.M.S. and Rundle, C.C. 1986. Lower Devonian age for the 'Great (basal) Conglomerate', Scottish Borders. *Scott. J. Geol.* 22, 285–288.
- Royal Commission on the Ancient Monuments of Scotland. 1967. An Inventory of the Ancient and Historical Monuments of Peeblesshire. 1, 1–194. H.M.S.O.
- Royal Commission on the Ancient Monuments of Scotland. 1985. An inventory of the Ancient and Historical Monuments of Roxburghshire. 2, 265–312. H.M.S.O.
- Rushton, A.W.A. and Stone, P. 1992. Terrigenous input to the Moffat Shale sequence, Southern Uplands of Scotland. *Scott. Geol.* 27, 167–170.

- Scott, A.C. and Rex, G.M. 1987. The Accumulation and Preservation of Dinantian Plants from Scotland and its Borders. European Dinantian Environments, 329–344. Wiley.
- Scott, A.C., Galtier, J. and Clayton, G. 1984. Distribution of anatomically-preserved floras in the Lower Carboniferous in Western Europe. *Trans. R. Soc. Edinb: Earth Sci.* 75, 311–340.
- Scrutton, C.T. and Clarkson, E.N. K. 1991. A new scleractinian-like coral from the Ordovician of the Northern Belt of the Southern Uplands, Scotland. *Palaeontology* 34, 179–194.
- Scrutton, C.T. and McCurry, J. 1987. The derivation, biostratigraphy and palaeogeographic significance of corals from Silurian deep-sea turbidite facies in the south-west Southern Uplands. *Scott. Geol.* 23, 49–64.
- Shiells, K.A.G. 1964. The geological structure of north-east Northumberland. *Trans. R. Soc. Edinb.* 65, 449–481.
- Shiells, K.A.G. and Dearman, W.R. 1963. Tectonics of the Coldingham Bay area of Berwickshire, in the Southern Uplands of Scotland. *Proc. Yorks. Geol. Soc.* 34, 209–224
- Shiells, K.A.G. and Dearman, W.R. 1966. On the possible occurrence of Dalradian rocks in the Southern Uplands of Scotland. *Scott. I. Geol.* 2, 231242.
- Sissons, J.B. 1963. The glacial drainage system around Carlops, Peeblesshire. *Trans. Inst. Brit. Geographers*, 32, 95–111.
- Smith, T.E. 1967. A preliminary study of sandstone sedimentation in the Lower Carboniferous of the Tweed Basin. *Scott. Geol.* 3, 282–305.
- Smith T.E. 1967. The faunal succession of the Upper Bernician. *Trans. Nat. Hist. Soc. Northumb. (NS)* 3, 591–645.
- Smith, T.E. 1968. The Upper Old Red Sandstone–Carboniferous junction at Burnmouth, Berwickshire. *Scott. Geol.* 4, 349–354.
- Stone, P., Floyd, J. D., Barnes, R. P., and Lintern, B. C. 1987. A sequential back-arc and foreland basin thrust duplex model for the Southern Uplands of Scotland. *I. Geol. Soc. Lond.* 144, 753–764.
- Strachan, I. 1982. The distribution of graptolites in south-east Scotland, with notes on the fauna of Old Cambus Quarry. *Scott. J. Geol.* 18, 158–165.
- Temple, A.K. 1956. The Leadhills-Wanlockhead Lead and Zinc Deposits. *Trans. R. Soc. Edin.* 63, 85–109.
- Toghill, P. 1968. The graptolite assemblages and zones of the Birkhill Shales (Lower Silurian) at Dob's Linn. *Palaeontology* 11, 654–68.
- Toghill, P. 1970. Highest Ordovician (Hartfell Shales) graptolite faunas from the Moffat area, south Scotland. *Bull. Br. Mus. Nat. Hist. (Geol.)* 19, 1–26.
- Toghill, P. and Strachan, I. 1970. The graptolite fauna of Grieston Quarry, near Innerlei then, Peeblesshire. *Palaeontology*. 13, 511–21.
- Walton, E.K. 1955. Silurian grey wackes in Peeblesshire. *Proc. R. Soc. Edin. B* 220 65, 327–57.
- Walton, E.K. 1975. 1-leriot and Peebles. In Craig, G.Y. and Duff, P. McL. D. (Editors). *The Geology of the Lothians and South East Scotland An Excursion Guide* Scottish Academic Press, 144–57.
- Walton, E.K. and Weir, J.A. 1974. The Upper Glenkiln–Hartfell cherts and mudstones of Broadlaw, and their stratigraphical significance. *Scott. J. Geol.* 9, 320–1.

- Webb, B. 1983. Imbricate structure in the Ettrick area, Southern Uplands. Scott. J. Geol. 19, 387–400.
- Williams, S.H. 1982. The Late Ordovician graptolite fauna of the Anceps Bands at Dob's Linn, southern Scotland. Geologica Palaeont. 16, 29–56.
- Williams, S.H. 1982. Upper Ordovician graptolites from the top Lower Hartfell Shale Formation (*D. clingani* and *P. linearis* zones) near Moffat, southern Scotland. Trans. R. Soc. Edinb: Earth Sci. 72, 229–255.
- Williams, S.H. 1983. The Ordovician-Silurian boundary graptolite fauna of Dob's Linn, southern Scotland. Palaeontology 26, 605–639.
- Williams, S.H. 1986. Top Ordovician and lowest Silurian of Dob's Linn. In Hughes, C.P. and Rickards, R.B. (Editors). Palaeoecology and Biostratigraphy of Graptolites. Geol. Soc. Spec. Pub. 20, 165–171.
- Williams, S.H. 1987. Upper Ordovician graptolites from *D. complanatus* Zone of the Moffat and Girvan districts and their significance for correlation. Scott. J. Geol. 23, 65–92.
- Williams, S.H. 1988. Dob's Linn — the Ordovician Silurian Boundary Stratotype. Bull. Br. Mus. Nat. Hist.(Geol.) 43, 17–30.
- Williams, S.H. and Ingham, J.K. 1989. The Ordovician-Silurian Boundary Stratotype at Dob's Linn, southern Scotland. In Holland, C.H. and Bassett, M.G. (Editors). A Global Standard for the Silurian System, Nat. Mus. Wales, Geol. Ser. 9, 27–35.
- Wilson, G.V. 1921. The Lead, Zinc, Copper and Nickel ores of Scotland. Spec. Rep. Miner. Resour. Geol. Surv. G.B. 17.
- Wood, S.P. and Rolfe, W.D.I. 1985. Introduction to the palaeontology of the Dinantian of Foulden, Berwickshire, Scotland. Trans. R. Soc. Edinb: Earth Sci. 76, 1–6. (This issue, part 1, pp 1–100, contains 12 papers devoted to the faunas, environment and ecology of Foulden).

## References