

# Archibald Geikie

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## Images



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## Timeline

### Date

### Details

1835 Born December 28th in Edinburgh. Educated at Edinburgh High School and University.

1855 Joined Geological Survey of Scotland.

1860 Accompanied Murchison to north-west and central Highlands.

Early survey work with H.H. Howell in Haddington. Then mapped area in Midlothian west of the coalfield, from Arthur's Seat and the Pentlands to Bathgate Hills and north into Fife.

1861 Geologist.

- Joint paper with Murchison to Geological Society "On the altered rocks of the Western Islands of Scotland and the North-west and Central Highlands". Interpretation generally accepted till 1878 when controversy reopened. "Chronology of the Trap Rocks of Sc
- 1862 Important paper to Glasgow Geological Society "The Glacial Drift of Scotland" (1863).
- 1865 "Scenery of Scotland" (3 editions).  
Mapped large areas of Old Red Sandstone in Midlothian, Lanark, Ayr, Fife, Perth and Kinross. Made series of traverses in basin of Moray Firth, Caithness, Orkney, Shetland. Results embodied in "Old Red Sandstone of Europe" (T.R.S.E. 1878).
- 1867 Director for Scotland.  
Important paper to Royal Society suggesting Tertiary age of basaltic plateaux of Ireland, West of Scotland and Iceland. Visited the Auvergne, Eifel district and South Italy.
- 1871 Elected to newly-founded Murchison Professorship of Geology and Mineralogy at Edinburgh; resigned 1881.
- 1879 Paper to Transactions of the Royal Society of Edinburgh "Carboniferous Volcanic Rocks of the Firth of Forth".  
Visited lava fields in Idaho on Pacific slope of US. (prior to lectures at Lowell Institute, Boston). Suggested similar origin for Tertiary volcanic plateaux of west. Europe.
- 1882 Director-General
- 1884 Geikie published new work and views (Peach and Horne) in "Nature" November 13th.
- 1888 Memoir to Royal Society of Edinburgh "History of volcanic action during Tertiary Period in British Isles" (results of 25 years of work).
- 1901 Retired.
- 1924 Died 10th November.
- 1861 "Life of Edward Forbes" (with Wilson).
- 1869 "Memoir of J.D. Forbes".  
"Life of Murchison".
- 1880 "Text book of Geology".
- 1887 "Geological sketches at home and abroad".
- 1895 "Life of Ramsay".
- 1897 "Ancient volcanoes of Great Britain".
- 1904 "Scottish reminiscences" and "Primers on geology and physical geology. Class book of geology "Field Geology".
- 1897 Lectures at John Hopkins University, Baltimore, afterwards published as "Founders of Geology".  
Later works "Landscape in History", and "Love of Nature among the Romans".  
President Geological Society 1891,1892,1907; President British Association 1892; President of Royal Society 1908-1913; Trustee B.M.; Member of 1851 Exhibition Commissioners; Member of Council of British School of Rome; Governor of Harrow School 1892-1922; F.R.S. 1865; Knighted 1891; K.C.B. 1907; O.M.1913; and Officier de la Legion d'Honneur; Associe Etranger de l'Institut de France; etc. Hon. Degrees from Edinburgh, Oxford, Cambridge, Dublin, Glasgow, Aberdeen, St. Andrews, Durham, Birmingham, Sheffield, L  
Gold Medals from: Geological Society; Royal Geographical Society of Scotland; Royal Society of Edinburgh; Royal Society of London; Institute of Mining and Metallurgy, Philadelphia Academy of Natural Sciences.

## Biographies and obituaries

[V. The Geological Survey under Sir Archibald Geikie, 1882-1901](#) From: Flett, J.S. 1937. The History of the Geological Survey of Great Britain. London: His Majesty's Stationery Office.

[1882 Geikie's accession](#) From: Bailey, Sir Edward. Geological Survey of Great Britain. London: Thomas Murby, 1952.

Times November 12th 1924

Geological Magazine (1890) p. 49

Geological Magazine (1924) p.515

Proceedings Royal Society B. XCIX (1926) p. i.

[Archibald Geikie](#) — Wikipedia article

Chisholm, Hugh, ed. (1911). [Geikie, Sir Archibald](#). Encyclopædia Britannica. 11 (11th ed.). Cambridge University Press. pp. 552-553.

Oldroyd, David. Geikie, Sir Archibald (1835-1924), geologist and historian. Oxford Dictionary of National Biography. Oxford University Press. <https://doi.org/10.1093/ref:odnb/33364>

[Geikie, Sir Archibald. 28/12/1835-10/11/1924](#) Biographical Index of Former Fellows of the Royal Society of Edinburgh (1783-2002). The Royal Society of Edinburgh. July 2006. ISBN 0-902-198-84-X.

[Sir Archibald Geikie Collection](#). Haslemere Educational Museum. [Includes comprehensive timeline].

## Publications

[142 works listed in the BGS Library catalogue](#)

### Date

### Details

1963 Memoir: East Berwick (1963).

1869 Memoir: Turnberry Castle (1869).

1900 Memoir: Fife & Kinross (1900).

1902 Memoir: East Fife (1902).

1866 Contibuted to Memoir: E. Lothian. (1866).

1861 Contibuted to Memoir: Edinburgh etc. (1861).

1869 Contibuted to Memoir: Peebles. (1869).

1869 Contibuted to Memoir: Ayr. (1869).

1869 Contibuted to Memoir: Girvan. (1869).

1872 Contibuted to Memoir: N. Ayrshire. (1872).

1873 Contibuted to Memoir: Central Lanarkshire. (1873).

1873 Contibuted to Memoir: Stranraer. (1873).

1873 Contibuted to Memoir: Whithorn, Burrow Head. (1873).

1871 Contibuted to Memoir: Sanquhar. (1871).

1877 Contibuted to Memoir: Dumfries. (1877).

1903 Contributed to Memoir: N. Arran. (1903).

1879 Contributed to Memoir: Airdrie etc. (1879).

1907 Contributed to Memoir: N.W. Highlands. (1907). Editor.

## BGS archives

Ref No	Title	Description
GSM/DC/A/C/6/242	A Geikie: Minute of appointment.	
GSM/DC/A/C/7/197	A Geikie: Minute of promotion.	
GSM/DC/A/C/7/478,519	A Geikie: Letters to R I Murchison on various Survey matters.	
GSM/DC/A/C/7/519	A Geikie: Letter on display of collections in Edinburgh.	
GSM/DC/A/C/8/	A Geikie: Letter on accommodation in Edinburgh.	
GSM/DC/A/C/8/116, 140, 157, 173	A Geikie: Letters to R.I. Murchison on various Survey matters.	
GSM/DC/A/C/8/116,157	A Geikie: Letter on accommodation in Edinburgh.	
GSM/DC/A/C/8/172-3	A Geikie: Letter on extra leave.	
GSM/DC/A/C/8/273-5	A Geikie: Letter on appointment as Professor.	
GSM/DC/A/C/14/158	A Geikie: Letters about his appointment and promotion	
GSM/DC/A/C/15/148	A Geikie: Letters about the appointment and promotion of Geikie	
GSM/DC/A/C/15/199, 201, 224	A Geikie: Letters to R I Murchison on various Survey matters.	
GSM/DC/A/C/15/224	A Geikie: Letter on sale of maps	
GSM/DC/A/C/15/?	A Geikie: Manuscript song sung by Geikie at an Annual Dinner	
GSM/DC/A/C/16/148	A Geikie: Letter concerning Geikie's visit to the Lipari Islands	
GSM/DC/A/C/17/38	A Geikie: Letters about the appointment and promotion of Geikie	
GSM/DC/A/C/23/80,82,95-96,105	A Geikie: Letters on need for a Porter in Edinburgh.	
GSM/DC/A/C/24/15	A Geikie: Letters on a vacancy.	
GSM/DC/A/C/24/61,67,74	A Geikie: Letters on a lack of space in Edinburgh.	
GSM/DC/A/C/24/217,226	A Geikie: Letters on the porter's salary.	
GSM/DC/A/C/24/271-3	A Geikie: Letters on leave of absence.	
GSM/DC/A/C/24/309-313	A Geikie: Letters on chemical apparatus.	
GSM/DC/A/C/25/48	A Geikie: Staff changes.	
GSM/DC/A/C/25/64,68	A Geikie: Time for completion of survey of Scotland.	
GSM/DC/A/C/26	Original letters sent to Director. [Series 'D']	Correspondence of A. Geikie.

GSM/DC/A/C/27	Original letters sent to Director. [Series 'D']	Correspondence of A.Geikie.
GSM/DR	Directors Papers	The following records form the personal and scientific papers of the Director's of the Survey...
GSM/DR/Ft/A/2	Correspondence on range of issues: letters to Bromehead, C.Davidson, H.Dewey, Fairley, A.Geikie...	
GSM/DR/Ge	Archibald Geikie	Geikie was born in 1835. He joined the Survey in 1855 and became Director for Scotland in 1867...
GSM/DR/Ge/A/5	Correspondence on various matters: letters to J.Craik, J.Evans, F.H.Hatch, J.Horne, D.R.Irvine, B...	
GSM/DR/Ge/A/7	Correspondence, minutes and papers of A. Geikie on range of issues including statement on...	
GSM/DR/St/A/27	(1) Sir A Geikie (2) Prestwich: Particulars in the life of Sir Andrew Ramsay	
GSM/GL/Bw	Henry William Bristow	Bristow joined the Survey at the outset in 1845 as one of six field staff. He worked on the...
GSM/GL/Bw/29/156	A Geikie: Progress in Scotland.	
GSM/GL/Ht/1	Correspondence with other geologists. Letters to Dakyns, A.Geikie, F.W.Rudler, and W.Ussher as...	
GSM/GL/Rd	Clement Reid	Clement Reid joined the Survey in 1874. He was the author of 'The Pliocene Deposits of Britain... "The Lament o' St Giles's Bells", "Early Flint Tools" by "Naturalist" and pages 3-6 of a paper on...
GSM/GX/Ha/1	Letters to J Geikie and three printed items	
GSM/GX/Wa/1	Letters from A R Wallace to J Geikie	
GSM/MG/C/12/67	W.H. Flower: Mentioned in letter from W.J. Wharton to A. Geikie.	
GSM/MG/C/12/117	R.H. Jones: Letter to A. Geikie about asbestos from Canada.	
GSM/MG/C/12/142	W. Miller: Letter to A. Geikie about specimens from British Honduras.	
GSM/MG/C/12/222	W.J. Wharton: Letter to A. Geikie about specimens from China.	

## Other archives

[Listing on Archives Hub](#)

## Archibald Geikie

Geikie was born in 1835. He joined the Survey in 1855 and became Director for Scotland in 1867. He was also the first Professor of Geology at the University of Edinburgh. His primary responsibility upon appointment as Director was to complete the mapping of the British Isles and wind up the Survey. He was keen to complete the mapping of Scotland and transferred staff from the England and Wales districts to Scotland for this purpose. Although H.H.Howell was appointed Director for Scotland, he worked mainly in the North of England and Geikie continued to supervise all survey work in Scotland. When Howell retired in 1899, Geikie did not appoint a successor. Geikie began a series of stratigraphical memoirs, intended to be a comprehensive investigation of the rocks of a specific formation such as the Jurassic or Cretaceous. This differed from the usual regional memoirs which described the geology of an area and marked a significant departure in Survey publications. The first of these memoirs was 'The Pliocene Deposits of Britain' by C.Reid, in 1890. Geikie also contributed to the science of petrography and microscopic petrology within the Survey and set up a basic chemical laboratory in Edinburgh to undertake rock slicing and analysis. He appointed petrologists to the staff including J.J.H.Teall, F.H.Hatch, W.W.Watts and J.S.Hyland. Geikie also encouraged photography within the Survey and collected a large series of photographs of Scotland which were drawn on for memoirs and his own book 'The Ancient Volcanoes of Great Britain' published in 1897.

During the last six months of his directorship, a Committee was established to enquire into the organisation and staff of the Geological Survey & Museum and report on its progress. It was chaired by J L Wharton and among other things it reorganised the staffing structure of the Survey to provide improved promotional opportunities to geologists.

## **Sir Archibald Geikie, K.C.B., P.R.S., &c., Honorary Member, 1863; President, 1893-1896.**

**Extract from: History of the Geological Society of Glasgow 1858-1908, with biographical notes of prominent members. Glasgow: Published by the Society, 1908. (Public domain copied from Internet Archive)**

The roll of Presidents of the Geological Society for the West of Scotland would have been woefully incomplete had it not included Sir Archibald Geikie. For, though he was born and educated in Edinburgh, and his two chief Scottish appointments were held in that city, he has made most important contributions to the geology of the Glasgow area, and many passages in his "Reminiscences" and in his "Scenery of Scotland" suggest that the western lochs and islands hold his deepest attachments. That he may be regarded as belonging to Western Scotland by geological and geographical sympathy may be inferred from his fondness for its scenery which he has so eloquently described and interpreted with unequalled insight.

Sir Archibald Geikie was born in Edinburgh on the 28th December, 1835. He was the eldest son of James Stuart Geikie, his younger brother being Professor James Geikie. He was educated at the

Edinburgh High School and University, and a charming essay on his first geological excursion shows that his interests in geology were early roused. His original geological work was begun in the Island of Arran, and was described in some articles that attracted the attention of Hugh Miller, by whose influence Geikie was appointed at the end of his University course and at the age of twenty to the Geological Survey of Scotland. Most of his official surveys were in the southern Uplands, Ayrshire, and the neighbourhood of Glasgow. His intimate personal knowledge of our area enabled him to draw from it many striking illustrations in his text-book and in his monumental work on "The Ancient Volcanoes of the British Isles." His name is familiar to us at the foot of several of the maps of the Glasgow district. His researches were by no means confined to the area of his official duties. He explored the Western Highlands and Islands, especially studying their extinct volcanoes and the Old Red Sandstone. He accompanied Sir Roderick Murchison in some of his Scottish journeys, and in 1861 was associated as joint author in two of Murchison's most famous Scottish papers, those on "The Coincidence of Stratification and Foliation" in the rocks of the Durness-Eriboll area, and on "The Sequence of Rocks in the South-western Highlands in comparison with that of the Grampians."

In 1871 Sir Archibald Geikie was appointed Murchison Professor of Geology and Mineralogy at the University of Edinburgh, and in the same year he married a daughter of Mons. Pignatelli, of Lyons. He had meanwhile, in 1867, been appointed Director of the Geological Survey for Scotland, and, after the retirement of Sir Andrew Ramsay in 1882, was naturally selected as Director-General of the Geological Survey of Great Britain and Ireland. He promptly began energetic and needed reforms. He secured the removal of some members of the staff whose work had been unsatisfactory, and attracted to it some of the most promising British geologists. On his retirement in 1901 it was universally recognised that he had greatly raised the status of the Survey, and secured its permanent establishment.

In 1903 his administrative ability found fresh scope as secretary of the Royal Society, and he has recently been elected its president. In 1906-7 he received the high compliment especially significant as it came from the most expert body of geologists in the British Isles of re-election as President of the Geological Society for a second term of office, so that he might preside at the Centenary of the Society. He had been President of the Society in 1891 and 1892, and President of the British Association at Edinburgh in 1892. The wide range of his work and influence naturally secured widespread recognition; he has received honorary degrees from all four Scotch Universities, and from Oxford, Cambridge, and Dublin; he is an honorary correspondent of the chief foreign scientific Academies, including the Institutes of France and Rome, the Academies of Belgium, Berlin, Christiania, Göttingen, Munich, New York, Philadelphia, Stockholm, Turin, Vienna. He has received the chief medals at the disposal of the Geological Society, the Royal Society, the Royal Society of Edinburgh, and others from foreign societies and Academies.

Sir Archibald Geikie's connection with the Society dates from 1862, when he read his important memoir "On the Phenomena of the Glacial Drift of Scotland," which occupies the second and larger part of the first volume of our Transactions. He is the senior honorary member of the Society, having been elected early in 1863. He was President from 1893 to 1896, and gave to the Society as his presidential address a graphic history of "The Latest Volcanoes of the British Isles."

It is impossible in a brief notice even to mention the various branches of geology and geography which Sir Archibald Geikie has advanced, and it would be unfitting to estimate the value of his work while it is still in progress. His writings are voluminous, and they are always original and suggestive. He has written more books than any other living British geologist, and his work covers an unusually wide range; his best-known researches are connected with physical geology, especially with denudation, glaciation, and volcanic action, with the formation of the Old Red Sandstone and the evolution of scenery; in a book which should be in every Scotchman's library he has followed Scottish scenery back to its geological causes, and in some illuminating essays he has traced the

psychological influences of geographical conditions and landscape upon the character and literature of the British race.

The following papers by Sir Archibald Geikie have been published in the Society's Transactions :

"On the Phenomena of the Glacial Drift of Scotland." Trans. Geol. Soc., Glasgow, vol. i., part ii., 1863, pp. 8-190. Map.

"Lecture on the Origin of the Present Scenery of Scotland." Trans. Geol. Soc., Glasgow, vol. ii., part i., 1865, pp. 4-12.

"On the Order of Succession among the Silurian Rocks of Scotland." Trans. Geol. Soc., Glasgow, vol. iii., part i., 1868, pp. 74-95.

"On Modern Denudation." Ibid., pp. 153-190.

"The Latest Volcanoes of the British Isles." Trans. Geol. Soc., Glasgow, vol. x., part ii., 1896, pp. 179-197.

"Recent Researches into the History of the Deposits known as Old Red Sandstone." Trans. Geol. Soc., Glasgow, vol. v., part ii., pp. 276-281.

## **Archibald Geikie as Director-General of the Survey**

**Extract from: From: Wilson, H.E. Down to earth - one hundred and fifty years of the British Geological Survey. Edinburgh:Scottish Academic Press, 1985. [In all directions: developments under Sir Henry's fourteen successors In all directions: developments under Sir Henry's fourteen successors]**

When Ramsay retired in 1881 Geikie (1835-1924) was appointed Director-General and moved to London. His arrogance — already well known to his Edinburgh staff — was immediately evident when he declared that he would continue to supervise Scotland, so no local Director was appointed there. In the following year, however, H.H. Howell was appointed Director in Scotland though he continued working in Newcastle until 1884.

Geikie was clearly under some pressure from the Government to complete the 'Geological Survey' as soon as possible, and some of his behaviour must have been occasioned by what he saw as his duty. His first priority was to complete the mapping of England and Wales which had been promised for 1884 and, while this was accomplished, most of the field survey was on the one-inch scale and little effort was devoted to the sheet memoirs.

In Scotland the Midland Valley had been largely covered by six-inch scale mapping and work was now proceeding in the Highlands where Geikie directed that the field men were to work on one-inch maps to expedite the Survey. (He gave the same instructions for the drift survey in Hampshire which provoked the Whitaker Memorials in 1884 (p.103). In Scotland it is said that field men bought their own six-inch maps and transferred lines to the one-inch sheets provided.

In Ireland Hull and his men were on the last lap of the primary survey, conducted almost entirely on the six-inch scale, and here only the internecine battle between Hull and G.H.Kinahan disturbed the progress in Hume Street.

With Howell's move to Scotland in 1884 Geikie transferred five of his English field staff to Edinburgh, including three who were to make international reputations in the Highlands — W.Gunn,



C.T.Clough and G.Barrow. The disposition of his field staff was then as follows:

	1881	1885
England	23	12
Scotland	10	13
Ireland	10	9

When Bristow retired as Director for England and Wales in 1888 Howell was made Senior Director for Great Britain, though he remained in Edinburgh and Geikie presided in Jermyn Street. Poor Howell can have had only a frustrating time — he was not allowed to interfere in the Highlands, which Geikie kept to himself, and in the South of England W. Whitaker and H.B. Woodward seem to have reported directly to the great man. Howell was only allowed to finish off the work in the North of England and supervise the part-time activities of Peach and Horne in the Southern Uplands.

Hull retired in 1890 and the Dublin office was reduced to a holding operation with Nolan retained as Senior Geologist and most of the staff pensioned off or transferred to Scotland. Geikie had now reduced his senior staff to one Director, (Howell, immured in the Sheriffs Court in Edinburgh), two district Surveyors (Whitaker and Peach) and one Senior Geologist. Megalomania had taken over.

There is no doubt that Geikie was a remarkable character — he toured extensively every year and his literary output was prodigious, though his staff tended to regard much of this as plagiarism. He apparently regarded the right to publish the findings of his staff as a kind of 'droit de seigneur'.

When Howell retired at the age of 65 in 1899, Geikie was left with no Directors and only two District Surveyors as against three Directors and four District Surveyors when he was appointed. He was then sixty-four and apparently impregnable — but among his staff of seventeen Geologists and seventeen Assistant Geologists feelings were running high. Not only was promotion to higher rank blocked, but of the Assistant Geologists some had been 'Temporary' for as long as twenty-five years, with no assurance of a pension, or, indeed, of continued employment after the end of the next month, while some had been 'Assistants' for thirty-five years.

How this small number of staff were able to influence parliamentary opinion is not clear, but questions were asked and a 'Memorial' was presented by the staff — including, apparently, the most senior of Geikie's lieutenants — to the President of the Board of Education, asking for an enquiry. In April 1900 the President appointed a committee to:

enquire into the organisation and staff of the Geological Survey and Museum of Practical Geology: to report on the progress of the survey since 1881 [the date of Geikie's assumption of the Directorship General]:- to suggest the changes in staff and the arrangements necessary for bringing the Survey in its more general features to a speedy and satisfactory termination, having regard especially to its economic importance; and further, to report on the desirability or otherwise of transferring the Survey to another public department.

The Committee was chaired by J. L. Wharton, MP, and included W. T. Blanford, former Director of the Geological Survey of India, and Charles Lapworth, Professor at Birmingham and at this time perhaps the most respected British geologist. Clearly they were not appointed to whitewash Geikie — it is interesting to speculate who was 'out to get him', apart from his staff — and in the result the

Committee reported at the end of September 1900, accepting the grievances of the staff and recommending a package of reforms.

The post of Director-General was to be abolished, the head of the organisation to be the Director: 'England and Wales' and 'Scotland' should each have an 'Assistant to the Director'; there should be seven District Geologists, five in charge of field units and two Specialists (Palaeontologist and Petrographer); all lower graded scientific staff should be Geologists, on a graded pay-scale and there should be a substantial increase in pay and allowances.

One can imagine the glee and satisfaction of the staff — and the fury of Archie G. , publicly humiliated by this criticism of his stewardship. In fairness he was under some pressure to complete the 'Survey' and wind down the organisation, and he had strongly supported an appeal by his temporary Assistant Geologists for establishment and promotion, sent to the Treasury in 1896, but his whole style of management had been autocratic and dictatorial and there were few tears when he finally retired in February of the following year, 1901. With the accession to the Directorship of Jethro Justinian Teal! (1849-1924) and the promotion to the posts of Assistants to the Director of H B Woodward (1848-1914) in England and John Horne (1848-1928) in Scotland the organisational shape of the Survey was set for over half a century. Each Assistant to the Director — the rank was changed to Assistant Director within a few years because of its 'ambiguity' — had two District Geologists under him and Teall set great store on team efforts, recasting the annual *Summary of Progress* to record work on a District basis. He also accepted, as appendices to the Summary, short papers on original topics by his staff.

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