

Dr. George Walker

Æviágrip - *Memoirs of George Walker*



Georg Walker og Hazel kona hans ágóðri stundu.
George and Hazel Walker on a good day.



Verðlaun og viðurkenningar sem Walker hlaut.
Some of Walker's awards and medals.



Bíreið Walkers, Austin A40 Countryman með númerið PZ-19, fóst í á Austurlandi.
Walker's car, an Austin A40 Countryman, registration number PZ-19, stuck in a river in eastern Iceland.



Walker gisti gjarnan í tjaldí áferðum sínum um landið.
Walker stayed in a tent on his field trips in Iceland.



Vísindamaðurinn George Walker í Imperial College, London.
George Walker the scientist, at Imperial College, London.

George Patrick Leonard Walker fæddist í London 2. mars árið 1926. Árið 1939 fluttist Walker með fjölskyldu sinni til Norður Írlands. Hann lauk menntaskólanámi frá Wallace High School í Lisburn, áður en hann hóf nám í jarðfræði og lauk B.Sc. námi árið 1947 og M.Sc. frá Queen's University, Belfast, árið 1949. Walker hóf síðan doktorsnám við Háskólann í Leeds og lauk þaðan doktorsprófi árið 1956. Ritgerðin fjallaði um ummyndunarsteindir í tertíera jarðlagastaflanum á Norður Írlandi.

Walker varð aðjúntk við Imperial College, London, lektor árið 1954 og dósent árið 1964. Hann kenndi almenna jarðfræði, steindafræði og eldfjallafræði. Hann var við Imperial College til ársins 1978. Hann flutti sig um set til Nýja Sjálands árið 1978 sem „James Cook Research Fellow of the Royal Society of New Zealand“ með aðsetur við Háskólann í Auckland. Þar var hann þar til í byrjun ársins 1981 að hann tók við nýstofnaðri prófessorsstöðu í eldfjallafræðum, sem kennd er við Gordon A. Macdonald við Háskólann í Manoa á Hawaii. Þar var hann þar til hann lét af störfum fyrir aldurs sakir árið 1996.

Árin 1954 – 1965 helgaði hann Íslandi að mestu, en upp úr því fór hann að ferðast um heiminn til rannsókna á eldfjöllum um víða veröld. Hann lagði upp í ferð til Íslands sumarið 1954, væntanlega að áeggjan prófessors Leonards Hawkes sem hafði unnið nokkuð á Íslandi. Í þeirri ferð skynjaði hann að á Austurlandi væri mikill óþlæggður akur í jarðfræðinni. Hann ákvað að sækja um nauðsynleg leyfi og styrki og hóf rannsóknir á svæðinu sumarið 1955.

Walker hóf kortlagningu sína á í elstu jarðlögunum á Austurlandi, á svæðinu á milli Norðfjarðar og Reyðarfjarðar, og hefur því strax verið ljóst að elstu jarðlögin á svæðinu voru í Gerpi og á Barðnesi. Næstu árin vann hann sig síðan upp í gegnum jarðlagastaflann og suður eftir Austfjörðum í átt til Hornafjarðar. Við vinnu sína á Austurlandi nauð Walker aðstoðar fjölmargra stúdenta sem hann leiðbeindi m.a. til doktorsnáms og eitt sumarið munu hafa verið á hans vegum um 17 stúdentar við vinnu og nám á Austurlandi.

Hazel kona hans var með honum flest sumur á Íslandi eftir að þau giftu sig árið 1958, og Alison dóttir þeirra fór í sína fyrstu för til Íslands árið 1962, þá á öðru aldursári. Síðar kom sonurinn Leonard einnig með í hópinn.

Walker fékk fjölmargar viðurkenningar fyrir framlag sitt til jarðvísindanna:

- Bréfafélagi Vísindafélags Íslendinga árið 1968.
- Félagi í hinu Konunglega Breska Vísindafélagi (FRS) árið 1975.
- Riddarakross Fálkaorðunnar árið 1980.
- McKay Hamarinn frá Jarðfræðifélagi Nýja Sjálands árið 1982.
- Lyell verðlaun Jarðfræðifélagsins í London árið 1982.
- Félagi í Jarðfræðifélagi Ameríku, 1987.
- Heiðursfélagi hins Konunglega Vísindafélags Nýja Sjálands, 1987.
- Heiðursdoktor frá Háskóla Íslands árið 1988.
- Heiðursfélagi í Ameríska Jarðeðlisfræði-sambandinu árið 1988.

Walker fékk Wollaston verðlaunin, æðstu verðlaun Jarðfræðifélagsins í London 1995 og Sigurðar Þórarinssonar verðlaunin frá International Association for Volcanology and Chemistry of the Earth's Interior (IAVCEI) – æðstu verðlaun í eldfjallafræðum – árið 1989.

George Walker fluttist aftur til Englands þegar hann komst á eftirlaunaaldur árið 1996. George Walker lést í Gloucester á Englandi 17. janúar 2005, á 79. aldursári.

Heimild: Ómar Bjarki Smárason 2007.

George was born on 2 March, 1926 and was brought up in London and then, after the outbreak of World War 2, in Northern Ireland. As a teenager he had decided that he knew nothing about botany or geology, so he bought a book on each subject and became rapidly captivated by the latter. He subsequently studied for his Bachelor's (1947) and Master's (1949) degrees in Geology at Queen's University, Belfast, and then moved to the University of Leeds to study the amygdale-filling minerals in the Tertiary basalt lavas of the Antrim Plateau under W.Q. Kennedy, completing his Ph.D. in 1956. He was appointed to an Assistant Lectureship at Imperial College in 1951, and was subsequently a Lecturer (1954-1964) and Reader (1964-1978).

George's research contributions focused around two areas, initially mineralogy, where he specialised in studies of the zeolite minerals that had developed in ancient sequences of basalt lavas, then subsequently in physical volcanology. His first major contributions arose from his recognition that different combinations of the many zeolite species (about 60 of which he was able to recognise casually in the field) were consistently present in specific rock layers and thus showed how far below the original ground surface any particular piece of lava had been buried. He started using these simple observations in studies of volcanic rocks in Antrim and the Inner Hebrides to reconstruct the largely eroded shapes of ancient volcanoes of which, for example, the islands of Mull and Skye are the remnants. More notably, he then mapped huge areas of otherwise monotonous basalt lava sequences in East Iceland and used the patterns of zeolite zonation to make fundamental inferences about the structure of the upper parts of the Earth's crust there. These observations, gathered over months of painstaking fieldwork, were critical in providing geological evidence for the process of sea-floor spreading during the development of the revolutionary ideas in Earth Sciences that have since become known as plate tectonics.

In 1963-67 the eruption of Surtsey occurred off the south coast of Iceland, and a visit to see this live volcano captured George's interest to the extent that he changed his research direction from old, cold rocks into the products of young volcanism. From the mid 1960s his research efforts were focused on young volcanic eruptions and their products.

In the period from 1967 to 1978, his studies covered a wide range of volcano types and eruption styles, from active lava flows on Mount Etna through huge ancient lava flows in the Deccan Traps of India, to the products of explosive eruptions in the Azores, Canary Islands, Italy and elsewhere. In his work on lavas, he recognised the importance of non-Newtonian rheology in controlling the morphology of lava flows, and of effusion rate in controlling travel distances.

He moved with his family to Auckland in February 1978. New Zealand gave George a new surge of creative energy, and he set about studying the explosive volcanism of the Taupo Volcanic Zone with great gusto. In his time there, he made important contributions to concepts of the eruptive styles and vigour of explosive eruptions, largely based around deposits from four events from Taupo and Okataina volcanoes.

Unable to stay in New Zealand, George's final career move took him to the University of Hawaii at Mānoa in early 1981 to take up the newly established Gordon A. Macdonald Chair in Volcanology, a post he held until retirement in 1996. In Hawaii, his interests naturally turned once again to basaltic volcanoes and eruptive processes.

George's achievements in research were recognised worldwide by elections as a Fellow of the Royal Society of London in 1975, an Honorary Fellow of the Royal Society of New Zealand in 1987, a Fellow of the Geological Society of America also in 1987, and as a Fellow of the American Geophysical Union in 1988. For his work in Iceland he was elected to honorary membership of the Iceland Science Society in 1968, received the Icelandic Order of the Falcon in 1980 (a rare honour for a foreign national) and in 1988 received an Honorary D.Sc. from the University of Iceland. From the UK, he received a D.Sc. from the University of London in 1982, and the Lyell and Wollaston Medals of the Geological Society of London in 1982 and 1995 respectively. In New Zealand, he won the McKay Hammer Award of the Geological Society of New Zealand in 1982. Most fittingly, for one with George's career history, he was awarded the Thorarinsson Medal (the highest award in volcanology) from the International Association of Volcanology and Chemistry of the Earth's Interior in 1989.

George's success as a scientist also owed much to the support given to him for over 40 years by his wife Hazel, who not only raised their children but typed and retyped manuscripts (in the days before word processors) and did large amounts of laboratory work for him.

Ref.: Colin J.N. Wilson, University of Auckland. Bruce F. Houghton, University of Hawaii.