GEORGE BARROW (11TH DECEMBER 1853 – 1932)

The Bandits' Lair.

The names of those desperadoes are, reading from left to right,
Back row – J.B.Hill ; L.W.Hinxman ; J.Horne ; G.Barrow.
Front row – J.Linn ; B.N.Peach ; H.Miller ; W.Gunn.

Figure 1: Barrow can be seen in the top-right hand corner within "Bandit's Lair" taken roughly around 1885 whilst visiting the Northern Highlands. Reproduced by permission of the British Geological Survey. © NERC. All rights reserved. CP13/011

Born in London, Barrow was a self-taught field geologist. Working for the Geological Survey, Barrow observed a regular succession of aluminosilicate minerals found in the pelitic metamorphic rocks (originally mudstones) in the SE Scottish Highlands.

He presented this work at a Geological Society meeting in 1893, after which the idea appeared to be ignored for some years. Cecil Tilley and Alfred Harker breathed new life into the idea of Barrow's 'zones' in the 1920s and 30s, giving the full 'Barrovian' index mineral succession recognition. In order of increasing metamorphic grade as pressure and temperature both increase: chlorite - biotite - garnet - staurolite - kyanite - sillimanite. It is illustrated well within Figure 2. Barrow's ideas that first came to mind just north of Dundee, underpin much of the elucidation of regional metamorphism in continental collision zones to this day.
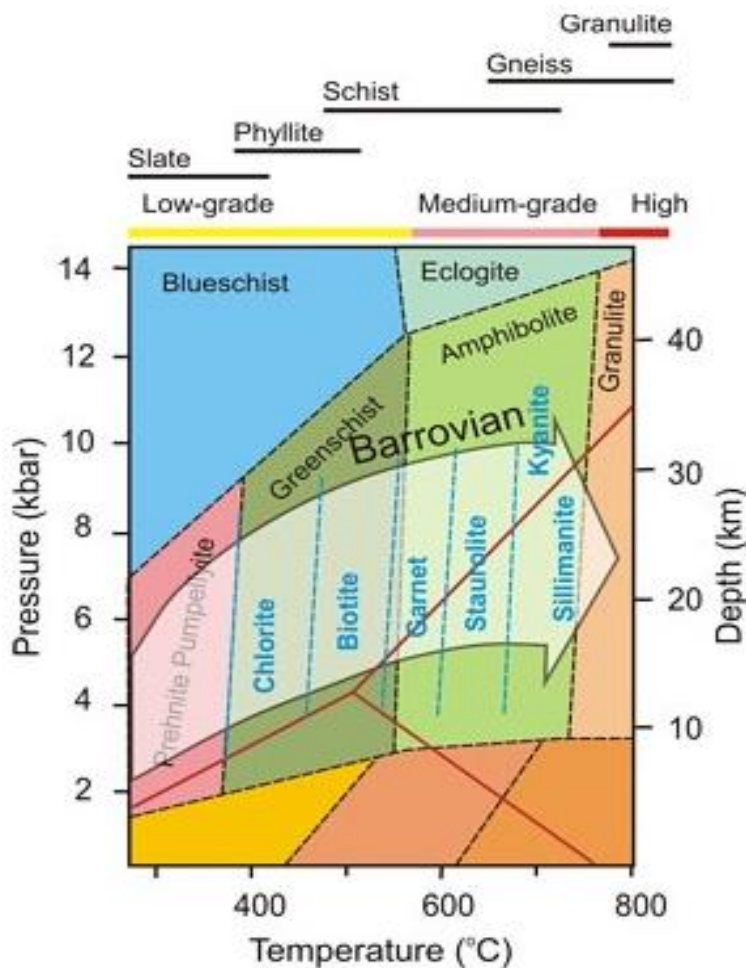

Figure 3: The Barrovian Zones developed by Barrow, which show the changes in metamorphic mineral assemblages that occur in metamorphosed pelitic rocks found within the Scottish Highlands. © Imperial College London

Researched by Stuart Swales/Edited by Naomi Harper - 2013 (NH/CL)

References:

Touret, J. L. R. & Nijland, T. G., "Metamorphism today: new science, old problems" in "The Earth Inside and Out: Some Major Contributions to Geology in the Twentieth Century", edited by David R. Oldroyd, Geological Society Special Publication No. 192

http://www.oxforddnb.com/index/101056917/George-Barrow

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