

**Manchester Geological Association
Williamson Building, University of Manchester
Saturday 10th November 2012 at 1.30pm**

Some Early North-West Geologists

13.30 – 14.30 The Bicentenary of the Manchester Geologist Edward William Binney (1812-1881)

Dr John Pollard, University of Manchester

14.30 – 15.00 Coffee Break

15.00 – 15.45 Jonathan Otley, Man of Lakeland – Dr Tom Smith, Science Historian

15.45 – 16.30 John Cunningham & Robert Grant - the forgotten stars of 1838

Dr Geoff Tresise, Honorary Curator Geology, National Museums Liverpool

**The Bicentenary of the Manchester Geologist Edward William Binney (1812-1881)
Dr John Pollard, SEAES, University of Manchester**

Edward William Binney, a self-educated geologist born in Lincolnshire, came to Manchester in 1835 to practise as a solicitor. From 1835-1840 he explored the local geology of the Manchester region, walking along stream sections, over the moors, quizzing colliery owners, well sinkers and quarry workers, recording his observations in a notebook. This notebook was recently rediscovered by Hugh Torrens and is now in the John Rylands Library. Binney was often accompanied by fellow local amateurs who set out to improve Elias Hall's (1834) first geological map of the region.

Binney was the first secretary of the Manchester Geological Society (MGS) founded in 1838 and he presented 4 papers in its first Transactions on, local geology of New Red Sandstone, South Lancashire coalfield, Coal Measures marine bands and fish. This work he continued in 1840s, was secretary of the geological section of BAAS meeting in Manchester (1842), became FGS (1842) and joined the Manchester Lit and Phil Soc. (MLPS). He tried unsuccessfully to set up a "Fund for scientists in humble life" (1843) but remained a benefactor for artisan naturalists and expressed social concern for women in mines and public health. In 1845 he defended a patent for chemist James 'Paraffin' Young, worked with him on oil from Riddings in Derbyshire (1849), and then went into partnership with Young as E.W. Binney & Co distilling oil from oil shale at Bathgate, near Edinburgh (1850 -1864). This made their mutual fortunes and founded the Scottish oil shale industry which continued until 1962. Binney defended Young's distillation patent from competition several times until it ran out in 1864.

In 1850s Binney widened his geological horizons working on Carboniferous trace fossils, Permian of N.W England and pioneer work on coal balls with J.D. Hooker which won him his FRS (1856). Also he was president of MGS and secretary of MLPS. During 1860s – 1870s Binney was respected, wealthy, locally powerful, leading amateur research and excursions but fell into conflicts with professional geologists, both academics of Owens College and with W. Hull of the Geological Survey. He worked on New Red Sandstone of

Cumbria & Dumfries, Upper Coal Measures of England and Scotland, Drift deposits and structure of Coal Measure plants. He bought an estate on the Isle of Man, 'Ravenscliffe' near Douglas, and owned a coal mine at Methil in Fifeshire.

Binney's interests widened in the last decade of his life (1870 -1881) when he devoted much of his time to MLPS being president three times, a record, and expressed concern for social conditions such as public health and safety in mines. He published a Palaeontographical Society monograph (1868-1875) on the structure of Carboniferous plants but through lack of botanical knowledge his work was partly eclipsed by W.C. Williamson.

Overall, he was the pioneer Manchester geologist of the 19th century who produced 70 papers and 130 contributions and although his palaeobotanical work has been superseded, the accuracy of his field observations and stratigraphical work were much praised by the Geological Survey geologists in the Manchester memoir of 1930s.

Jonathan Otley, Man of Lakeland **Dr Tom Smith, Science Historian**

Jonathan Otley was born in the Lake District in 1766 and he lived there throughout his entire ninety years. He earned his living as a watchmaker but he was also a self-taught geologist, mineralogist, meteorologist, botanist, topographer and cartographer. He drew the first accurate map of the English Lakes in 1818 and he produced the first concise guidebook to the area. He was much admired for his knowledge, skills and capabilities, and for his quiet, unassuming personality. He became the friend of some celebrated nineteenth century men of science.

Copies of his guidebook are extremely scarce today and most of his other work has virtually disappeared.

He tramped the lakes and fells in his search for knowledge, so it would seem appropriate that this talk should describe the tremendous amount of work which he undertook and should consider that part of it which earned him the posthumous title, 'The Father of Lakeland Geology.'

John Cunningham & Robert Grant - the forgotten stars of 1838 **Dr Geoff Tresise, Honorary Curator Geology, National Museums Liverpool**

In 1838 the strange hand-like footprints known as *Chirotherium* were recognised in Cheshire by the Liverpool architect John Cunningham. Soon after, they were publicised by Robert Grant, lecturer at University College London. At the time, both men seemed destined for glittering careers. But Cunningham's architectural work would be derided by future generations while Grant declined from affluence to near destitution. Their relationships with powerful scientific colleagues were equally unfortunate. Grant antagonised both Richard Owen and Charles Darwin, while Cunningham's discoveries were pointedly ignored by the newly-formed Liverpool Geological Society. The talk will consider their initial achievements and subsequent fall from grace.