Richard Kirwan: The Dublin Philosopher- Pioneering Scientist, Hypochondriac & Eccentric

Richard Kirwan, famed for being a scientist and eccentric, was born the second son of four, in 1733, in Cloghballymore, Co. Galway. His family lived in the historic Cregg Castle which was built by their ancestors. Being the second son he was destined for a profession, in his case that of priest.
Fate intervened, due to the death of his elder brother in a duel, Richard left the Jesuit noviciate in Paris to return to Ireland to look after the family estates.

Events surrounding his marriage were equally dramatic, the fact that his wife had £4,000 of her own money helped to bring him to the altar, only to find that the day after the wedding he was imprisoned until he paid his wife's debts. Despite the less than idyllic start it was a very happy but short marriage, cut short after only 8 years by his wife's sudden death in 1765. He lived in London 1777 to 1787 and was elected a Fellow of the Royal Society in 1780 and awarded the Copley Medal for his work on chemical affinity in 1782. In 1799 he was elected the second President of the Royal Irish Academy.

In addition to the volume *Elements of Mineralogy* (1784) and his best-known book, *Essay on Phlogiston* (1787). Lavoisier and others (including Sligoman William Higgins) proved him wrong, and Richard did exactly what scientists ought to do when experiments demonstrates that a theory is shaky, he publicly acknowledged "the subversion of the phlogisitic hypothesis."
Apart from his widely acknowledged publications in chemistry, he also important contributions to mineralogy, meteorology and climatology; he published a two-volume work on logic; and a volume of essays on metaphysics.

Kirwan was a notable eccentric, mainly due to medical reasons. He suffered from hypochondria, dysphagia, dipteraphobia, thermophyllia and nocturnal cammellisphyllia. He wore his hat and overcoat indoors and due to a difficulty in swallowing, always ate alone, subsisting largely on chopped ham and milk. When out walking he was seen with a tame eagle on his shoulder accompanied by one or more of his large dogs.

Richard Kirwan was a devout, orthodox Christian. For Kirwan, geology was the handmaiden of true religion, and he repeatedly expressed alarm at systems of geology that struck him as favorable to atheism. His *Geological Essays* (1799) advocates flood geology and vigorously opposes the increasingly influential uniformitarian theories of geologist James Hutton.

Kirwan was also active in the physical sciences; he established the first reliable Irish meteorological station. From his results and those of John Rutty he established from the patterns observed the basis of long-range weather forecasting. Kirwan was the first to define and measure specific heats of materials. In 1788 Kirwan wrote an essay on 'Variations of the Barometer'. This was a wide-ranging critical account of changes in barometric pressure with wind, temperature, altitude, water vapour, diffusion at higher altitude and the *aurora borealis*. He also introduced the terms 'polar' and equatorial air' to meteorological jargon.

Kirwan's chemical based studies were extensive from chemical affinity, mineral water analysis, the phlogiston controversy, chemical nomenclature, bleaching, minerals and chemical based mineralogy to the application of chemistry to agriculture. He was responsible for the purchase of the world famous mineral collection known as the Leskean Cabinet for the Dublin Society. His texts on "Mineralogy" and on "Mineral Water Analysis" were the standard reference texts on these subjects for many years.
He was in dispute with the "Vulcanists" or "firemen" in regard to the origin of basalt rocks being a "Neptunist" or "waterman" as he believed in the Mosaic account of creation and in Noah's flood.

Many of his later publications concerned classical and metaphysical studies. His text on "Logic", written for students of law, is most interesting as it contains an early application of probability theory to events and to the credibility of witnesses to events.

The lecture by Professor Burns will argue that Kirwan's contributions across several areas of science have been seriously undervalued. His name deserves to be commemorated with pride as an outstanding Irish scientist with international fame in his time.