

## **1845 AND ALL THAT**

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It's unlikely that 1845 AND ALL THAT will reach as wide an audience as 1066 AND ALL THAT, written in 1930 by Walter C Sellar and Robert J Yeatman, which was later to reach the London stage.

However, 1845 deserves our interest because of the extraordinary range and importance of the events which took place during the year in travel and exploration, science, medicine, social issues and the arts.

Before considering some of these in more detail a short resume of interesting features includes the patenting of elastic bands by Stephen Perry; the first use of anaesthesia in childbirth by Dr. Crawford Long in Jefferson, Georgia; Michael Faraday discovered that a strong magnetic field can rotate the plane of polarized light; potato blight decimated the potato crop in Ireland; Richard Wagner's 'Tannhäuser' received its premier in Dresden; and Cambridge won the first Boat Race over the championship course from Putney to Mortlake.

In Britain the main domestic issue was the state of the railways. A farcical situation had arisen in which two different gauges were being developed in the North and South of the country - the so-called "gauge war" had broken out between those supporting Brunel's 7ft broad gauge of the Great Western Railway and those advocating the narrow gauge of 4ft 8 ½ ins developed by George Stephenson from the old wooden tramways of the Northumberland collieries. A Government Commission was set up in June 1845 and reported its findings the following year. It constituted a bit of a fudge as, although the narrow gauge was recommended, the broad gauge continued on the GWR until 1892. In the meantime stations such as Gloucester, where the two gauges met, were frequently chaotic while people, cargo and livestock were transferred from trains originating in Birmingham (narrow) to trains bound for Bristol (broad) and vice versa. The scene was lampooned in an article in The Illustrated London News. Railways were developing very rapidly in the mid 1840s. Indeed the first edition of "Scientific American" published on August 28<sup>th</sup> 1845 featured "an improved railroad car" on its front page beneath the banner heading.

On May 19<sup>th</sup> 1845 HMS Erebus and HMS Terror, under the command of Sir John Franklin, set sail from Greenhithe on the Thames in an attempt to find the North West Passage - at that time the Holy Grail of navigation endeavours. They were last seen in Baffin Bay and subsequently disappeared. Lady Jane Franklin and the Admiralty financed many expeditions in the following five years in an attempt to find Franklin but all were unsuccessful. A major exhibition at the British Library in 2015 set out the events culminating in the discovery of the Erebus in September 2014 by a Canadian Naval team.

1845 was a very remarkable year in the field of haematology. John Hughes Bennett, a native of Exeter and graduate of Edinburgh Medical School, described two cases of a disease in which death occurred from "suppuration of the blood" which he described as leucocythaemia. A month later Rudolf Virchow, working in the Charité Hospital in Berlin, described a case which he called Weisses Blut

and two years later added more cases in another report with the heading "Leukaemia". There was much debate surrounding the interpretation of the significance of their findings between the two centres and there was a great deal at stake on the question of "who was first?". It is to the credit of both scientists that they maintained mutual respect for each other's work. Both made great contributions to the developing field of microscopy, which some other prominent physicians considered to be a distortion of nature. Bennett had an impressive international reputation and was a founder and President of the English Medical Society in Paris. Virchow founded a new political party and was a leader in many public health initiatives in the second part of the 19<sup>th</sup> century.

John Hughes Bennett's grandfather, Richard Hughes, was an impresario who managed and later owned several theatres including Sadler's Wells. He produced shows such as "Penmaenmawr - or the Wonders of Wales". His family was from a Welsh background, probably from Denbighshire.

The treatment of leukaemia has become increasingly intensive with the advent of bone marrow transplantation and adequate supportive care. The classification of its sub-groups has passed through phases: recently the identification of a variety of molecular events is now known to define individual groups, which to a large extent can predict the response to treatment.

A further important milestone in the history of haematological disorders was the description in 1845 of a hitherto unidentified protein in the urine of patients with multiple myelomatosis. The protein was isolated by Dr. Henry Bence Jones, a physician and biochemist at St George's Hospital. The protein is still referred to as "Bence Jones protein" in requests to biochemical laboratories. Myeloma can be an extremely debilitating disorder often presenting with pathological fractures due to erosion of weight-bearing bones. The treatment of myelomatosis has improved considerably in the last twenty years with the reversal of bone erosion and an earlier treatment programme. It is predominantly found in older age groups in which other problems that accompany advancing age may arise.

Henry Bence Jones was born in Suffolk, where some of his descendants still live. He married Lady Millicent Acheson, who, although she was his cousin, received the support of Lady Noel Byron, widow of Lord Byron. He became Secretary of the Royal Institute and a great friend of Michael Faraday. Following the death of his friend he was asked to collate and publish Faraday's letters, which he did in 1870. The Jones side of the family are, according to Burke's Peerage, originally from Haverfordwest.

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