

W. J. MacNeven: Father of American Chemistry

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William James MacNeven truly merits the title "Father of American Chemistry" but undoubtedly he himself would rather be remembered as an Irishman, though history has not accorded him the recognition he deserves as an Irish patriot. He merits a place in Irish history equal to that of his friends and fellow United Irishmen, Wolfe Tone, Emmet and Lord Edward Fitzgerald. He did not pay the supreme sacrifice for his native land as they did, but his patriotism was of a more practical and pragmatic nature, and he deliberately and unselfishly sacrificed a lucrative and potentially eminent medical career in Dublin to help his repressed and persecuted fellow countrymen. He also suffered the ignominy of being expelled from the Royal College of Physicians in London. In February and March 1787 he had passed the three-part oral examination of the College and on 2nd April, 1787 was admitted a Licentiate. But at the quarterly meeting of the Fellows on 1st October, 1798 the motion was passed: 'That the College do approve of the Censors on the erasement of the name of Dr. MacNeven from the College List'.¹

But for his exile, his name would now most probably be listed with the giants who graced the Dublin medical scene in the early nineteenth century. His accomplishments and his high standing in medical education in New York leave little doubt on this.

MacNeven was born at Ballynahowna near Aughrim, County Galway on 21st March, 1763, the eldest son of James and Rosa MacNeven. His daughter states that the family had been transplanted from Ulster to Connaught in the Cromwellian settlement,² but the family is, in fact, an ancient East Galway family extending back to the pre-Norman era. O'Donovan lists Mac Cnaimhin (MacNeven or McKnevin) as one of the Tribes of Hy-Many, settled at Crannog MacCnaimhin near Tynagh. Hugh McKnevin, a direct ancestor of William James was hanged at Galway in 1602 for rebellion and in 1610 his estate was granted to the Earl of Clanrickarde.³ The family home was sold on William James' exile in 1798 and, sadly, no trace remains of it today though its exact location is well known locally and the house is shown on an Ordnance Survey map of 1861.⁴

At the age of 11 years MacNeven was sent to his paternal uncle Baron O'Kelly MacNeven in Prague to be educated. As with other Catholic families appropriate educational facilities were not available during the Penal Laws in Ireland. His uncle was Physician to the Empress Marie

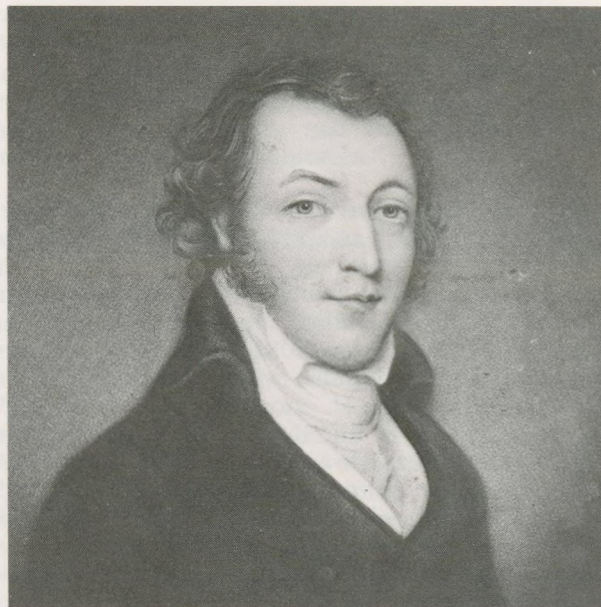


Figure 1: W. J. MacNeven, M.D., about 1797, from a drawing by Herbert (Courtesy National Library of Ireland).

Theresa and had been elevated to the Austrian Nobility for his skilled services to the Court. A sound classical education was provided in Prague and then William James studied medicine in Prague and Vienna, graduating M.D. from the University of Vienna in 1783 at the early age of 20 years. The following year he returned to Dublin and commenced practice as a physician.²

According to his daughter's account in Madden's *Lives of the United Irishmen* his practice prospered and he was enabled to live genteely and independently and to keep with ease his station in society.² With his education and family background he was assured of a brilliant career in Dublin if fate and his own single-minded attachment to his principles had not determined otherwise. Incidentally, it is of interest to comment in passing on the remarkable number of doctors who were prominent in the United Irishmen. Madden lists at least thirteen medical members, among whom were William Drennan and Whitley Stokes.⁵

MacNeven became associated with the Catholic Committee and in the split of 1791 strongly opposed the faction of landed Catholic gentry led by Lord Kenmare. He sided with the merchants and professional elements favouring a stronger more determined approach to the Government for Catholic rights. In the following year he was elected to the Catholic Convention by both Galway and Navan and opted to represent Navan. He distinguished himself in the so-called 'Back Lane Parliament' which by-passed the Govern-

*You might be interested in this:
Hope to be back in Pittsburgh
about April '89. See you then.
many thanks for all you help
for many*

ment in Dublin and sent a deputation to London to press their claims for reform. The deputation was surprisingly well received by the ministers in London and due largely to the advocacy of MacNeven obtained the enfranchisement of the 40-shilling freeholders, who ultimately formed the political power base on which Daniel O'Connell achieved Catholic Emancipation in 1829.⁶

After the Convention, MacNeven was sought out by Lord Edward Fitzgerald and Arthur O'Connor but, though he became close friends with them and with Wolfe Tone and sympathised with their aims, he was obviously reluctant to commit himself formally to the United Irishmen. He favoured reform by political means and did not take the Oath until December 1796 when the Convention Act of 1794, the Insurrection Act of February 1796 and the savage repression in Armagh, Carlow, Kildare, Wicklow and Wexford convinced him that progress towards emancipation by peaceful means was not possible in the circumstances then prevailing in Ireland.²

The Oath was administered to him by the beautiful daughter of James Moore of Thomas Street, and Madden was in no doubt that MacNeven had hoped to marry her.² But he was caught up in a rapid train of events which caused him to abandon his lucrative medical practice and all romantic aspirations. He became a member of the Leinster Directory, was involved in negotiations in Dublin with an emissary from General Hoche and Wolfe Tone, and was sent as agent to the French Minister in Hamburg in June 1797, where he imprudently wrote a memoir for transmission to the French Government asking for financial and military help.² The memoir found its way into the hands of British intelligence and ultimately almost cost him his life. He went from Hamburg to Paris to confer with Tone and shortly after his return to Dublin was arrested on the 12th March, 1798 with Oliver Bond, Arthur O'Connor and Thomas Addis Emmett and lodged in Kilmainham Jail.²

A pact made by the prisoners represented by MacNeven, T. A. Emmett and Arthur O'Connor with the Dublin Government in August 1798, permitting their exile has been often misunderstood and unjustly criticised. It was undoubtedly agreed to by MacNeven and his friends to end the savage retribution being wreaked on the defenceless population of the Leinster counties and especially to save the life of Oliver Bond then under sentence of death. This is evident from MacNeven's *Pieces of Irish History* published at his own expense in New York in 1807, in which he corrects the deliberate misrepresentation of the Dublin Castle officials concerning the testimony of himself and his close friend Thomas Addis Emmett before the Government Secret Committees.⁷ Their fellow United Irishmen and contemporary commentators had no doubt about their principles and approved of their action.²

Rufus King, the American Minister at the Court of St. James, would not permit their emigration to

America and MacNeven and his friends were interned in Fort St. George, Scotland, until the Treaty of Amiens permitted them to go to Europe in 1803.⁸ MacNeven visited his relatives in Bohemia, and went on a walking tour in Switzerland about which he wrote a book *A Ramble Through Switzerland*. He then entered the French Army as a Surgeon-Captain in the Irish Brigade but realising that the French would never again come to the aid of Ireland, he resigned his commission and departed for America. He arrived in New York on Independence Day, July 4th 1805, to embark on a completely new and successful career in which he played a significant and innovative role in medical education in America.⁹

He commenced medical practice in New York city where his close friend Thomas Addis Emmett was already practising Law. He must have made an immediate impact in medical circles in New York as Columbia College conferred an M.D., *ad eundem* on him in 1806, and in 1807 he was invited by the newly established College of Physicians and Surgeons to give a series of lectures on clinical medicine at the New York Almshouse, to which he was attached as Assistant Physician. He was also appointed as a censor to the College by the Medical Society of the State of New York and in 1808 was appointed Professor of Midwifery and Diseases of Women and Children in the College. His lectures emphasised the importance of bedside teaching in medicine and of supervised practical instruction in midwifery.¹⁰

During his days in Dublin he had become friendly with his fellow Galwayman, the scientist, Richard Kirwan, who kindled his interest in chemistry. When the teaching faculty of the College of Physicians and Surgeons was reorganised in 1810, MacNeven was appointed Professor of Chemistry to which was added *Materia Medica* in 1816, while his younger colleague and subsequent biographer J.W. Francis, was absent in Europe.¹¹

MacNeven established the first chemistry laboratory in New York and pioneered practical laboratory instruction for medical students,¹¹ which earned him the title 'Father of American Chemistry'. The outline of his lectures and demonstrations, which he published in 1820, makes very interesting reading and much of its contents would be applicable in the medical curriculum to-day. He spoke of the relation of electricity and galvanism to chemical changes, the composition of the atmosphere, fermentation and the character of its products, the application of chemical principles to the treatment of diseases, mineral waters, diuretics, antacids and antispasmodics, among other topics. He lectured on doses of medicine and the precautions necessary in their application and on remedies of the sexual system of both the male and the female. His approach to the treatment of diseases with drugs and by physical means was both scientific and methodical. He illustrated his lectures with carefully planned experiments to clarify the

matter under discussion and one of his students has commented that he enlivened them with humorous anecdotes.¹¹

He was co-editor of the *New York Medical and Philosophical Journal and Review* from 1812 to 1823 to which he contributed many articles. He was a founder member of the Literary and Philosophical Society of New York, which frequently met at his house, No. 7, Park Place, New York. In 1823 he was elected a Fellow of the American Philosophical Society. As well as being a Physician and Chemist, MacNeven was an erudite classical scholar and an accomplished linguist being fluent in German, French and Italian as well as English and Irish. Some of his published papers, for example those on mineralogy, were written in German for European journals.¹¹

In 1819 he gained world-wide recognition for his scholarly treatise 'Exposition of the Atomic Theory of Chymistry and the Doctrine of Definite Proportions' reconciling the basic principles of Dalton's 'Atomic Theory' published in 1808, with the subsequent observations of Gay-Lussac and the formulae of Berzelius.¹² This work showed a profound theoretical knowledge of chemistry for the period and a translation was published in the French *Annales de Chimie*.¹¹ His next major work was to edit and annotate the first American edition of W. T. Brande's *Manual of Chemistry* in 1821, which went into a second edition in 1829.¹¹

The influence of Kirwan was evident in MacNeven's special interest in mineralogy, the analyses of spa waters and chemistry in agriculture. His paper in 1815 to the Literary and Philosophical Society of New York on 'The Chemical Examination of the Mineral Waters of Schooleys Mountain' in New Jersey gained him recognition as an authority on spa waters and in 1825 he gave a series of lectures on 'The Application of Chemistry for Agriculture' to the New York Athenaeum of which he was also a founder member.¹¹

In 1826 MacNeven and four other professors of the College of Physicians and Surgeons disagreed strongly with the Board of Regents and the Medical Society of the State of New York over the recognition of the small village medical schools which 'purported to teach anatomy and surgery without a cadaver and physic without a patient'. MacNeven was quite emphatic that adequate clinical material was available only in the larger urban institutions. He and his colleagues also resented the interference of the trustees in the appointment of Faculty Staff and resigned their College appointments. Although they set up a rival medical school at Duane Street, New York City, affiliated with Rutgers College in New Jersey, the Regents (Marcy, Van Rensselaer and Talmadge) publicly expressed their appreciation for their dedicated and faithful service to the College, mentioning specifically the significant role of MacNeven in its foundation.¹⁰

The Duane Street Medical School was an instant success, especially MacNeven's course on materia

medica and therapeutics, but its charter was declared invalid and, though it transferred to Geneva College in New York State in 1828, it was finally closed in January 1829 by the New York State Assembly. This brought MacNeven's academic career to an end but he continued in medical practice in New York City until severe illness forced his retirement in 1838, when he went to live with his step-daughter and her husband, T. A. Emmett, Junior, the son of his close friend from his Dublin days, at their home Mount Vernon on Long Island.

When Asiatic cholera reached New York in 1832, MacNeven was appointed to the Medical Board set up to advise the city authorities on the measures to be taken. The Board's majority report denied that the disease was contagious or communicable but MacNeven issued a public dissenting report pointing out that the disease was a 'nova pestis' and its spread was 'sub modo contagion'. Such was MacNeven's stature that his recommendations were accepted and acted upon which helped in limiting the severity of the epidemic. Governor Clinton appointed him Resident Physician of New York and the appointment was renewed by his successor Governor Seward in 1840 though MacNeven had by then retired from practice.¹⁰

MacNeven's growing eminence in New York medical, scientific and social circles had never diverted him from compassionate and pragmatic efforts to help the swelling waves of Irish immigrants arriving in the rapidly expanding cities of the eastern seaboard and he remained deeply involved with Irish affairs until his last illness.² Indeed there are many instances on record of his giving assistance out of his own pocket to needy Irish families setting up home in New York.¹¹

In 1816 at his own expense he set up a free labour bureau in Nassau Street to help and advise Irish emigrants to find work, the first such organisation in New York. Recognising the disadvantages of large numbers of Irish immigrants congregating in the alien environment of the cities, he petitioned Congress for grants of lands in what is now Ohio and Indiana, but his petition was refused by a narrow margin. He was founder and first President of the 'Friends of Ireland Society' in 1828 and his last public speech was at the St. Patrick's Day 1837 dinner of the Irish Emigrant Association of which he was President. Despite previous criticism of him by Daniel O'Connell, he proposed the toast to O'Connell and generously praised O'Connell's constitutional agitation with its emphasis on carefully controlled monster rallies, though also regretting that such tactics were not possible in the days of the Catholic Convention.²

In 1810 MacNeven had married Jane Margaret, widow of John Tom, a New York Merchant and daughter of Samuel Riker of a prominent old New York Dutch family. They had a happy family life though marred by the scourge of tuberculosis, which had virtually wiped out his family in Aughrim, and was to claim, their eldest son at the