

Turner, Edward

(1796–1837)

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Turner, Edward (1796–1837), chemist, was born at Teak Pen, Clarendon, Jamaica, on 24 June 1796, the second son of a Scottish sugar planter, Dutton Smith Turner (*d.* 1816), and his Creole wife, Mary Gale, *née* Redwar. He was sent at an early age to Bath, where he received his schooling at the grammar school until 1811. After serving a medical apprenticeship and graduating MD at Edinburgh in 1819 he practised medicine in Bath for some time before he joined his Edinburgh friend, Robert Christison, in chemical and pharmaceutical studies in Paris. From 1821 to 1823 he studied mineral analysis under Friedrich Stromeyer, one of the German pioneers of practical chemistry teaching, at the University of Göttingen. In 1824 he established himself as an extramural lecturer in chemistry at Edinburgh, where he also held practical classes and published a students' guide to Dalton's atomic theory and Berzelius's views on chemical composition. In November 1827, despite strong evangelical convictions, he accepted the chair of chemistry and a lectureship in geology on the opening of the secular University of London, posts he occupied, despite serious ill health, for the rest of his life.

Edward Turner wrote one of the best of all nineteenth-century textbooks of chemistry, *Elements of Chemistry* (1827), which went through eight editions, being revised and enlarged after his death by his brother, W. G. Turner [*see below*], in conjunction with Justus Liebig and William Gregory, who modernized organic chemistry. In 1834 Turner persuaded a British Association committee of the value of Berzelius's chemical symbols, the fourth (1833) edition of his textbook being the first to deploy them consistently. Most of his forty published papers and memoirs dealt with the analysis of minerals and salts, but only his elucidation of the ores and oxides of manganese was important. Of greater long-standing significance was his work on atomic weights. Stimulated by the hypothesis proposed by William Prout, and by the experimental work by which Thomas Thomson in 1825 sought to confirm it, Turner examined the question for himself. In two important review papers published in the Royal Society's *Philosophical Transactions* (1829 and 1833) he pointed out many sources of errors in Thomson's work, and obtained accurate results that agreed with those of Berzelius. He concluded that Prout's hypothesis that 'all atomic weights are simple multiples of that of hydrogen—can no longer be maintained' (*PTRS*, 1833, 544). Nevertheless, he did not deny that a simple relationship between atomic weights might one day be discovered.

Turner was elected a fellow of the Royal Society in March 1830 and was also a fellow of the Royal Society of Edinburgh. His strong interests in geology and mineralogy led to his appointment as secretary of the Geological Society from 1830 to 1835, when he became a vice-president. He died in London, at his home, Hampstead, 38 Upper Gower Street, from stomach cancer and influenza on 12 February 1837. He was buried in Kensal Green cemetery on 18 February. He remained unmarried, being cared for by sisters.

Turner's younger brother, Wilton George Turner (1810–1855), was born at Teak Pen on 9 December 1810. He was a student at the Edinburgh Academy before joining his brother in London and attending mathematics and chemistry classes at University College, London (UCL). Following his rejection for the chairs of mathematics at UCL and for another in mineralogy in 1834, he taught mathematics at University College School from 1832 to 1839. He married, at St Pancras on 27 October 1836, Marie Auguste Frick, sister-in-law of the Berlin chemist Gustave Rose. They had two daughters and a son. After teaching chemistry at Sydenham College he became a partner of Christian Allhusen (1806–1890) at Newcastle upon Tyne in the manufacture of alkali. Following research on the use of guano as a feedstock for chemical manufacturers, he emigrated to Demerara, British Guiana, to run a sugar plantation and zinc refinery. He died at Salt Cay, Turks Island, West Indies, on 23 October 1855.

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See also

Turner, Wilton George (1810–1855)

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