



A wine-coloured Snapdragon.

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### Snapdragon (*Antirrhinum*)

Wheldale's eventual decision in 1914 to shift her researches from **William Bateson's** classical genetics to **Frederick Gowland Hopkins's** biochemistry reflected her curiosity about the chemical processes at work in flower pigmentation.<sup>1</sup> It was this fusion between the genetic and biochemical that made Wheldale's research so innovative. The move was symbolic of her attempt – at this early stage in the history of genetics – to provide a biochemical basis for the action of genes and hence, a mechanistic account of Mendelian inheritance.

To this end, during 1909 Wheldale had earlier worked with **Maximilian Nierenstein** at the University of Bristol. Nierenstein offered specialist expertise in chemistry that Wheldale had hitherto lacked.<sup>1</sup>

On the basis of this research, Wheldale went on to publish *The Anthocyanin Pigments of Plants* in 1916 (second edition, 1925). Nevertheless, early results from c.1914 were only belatedly followed-up when Wheldale prompted **Rose Scott-Moncrieff** to conduct further investigations in 1926. By this point, Scott-Moncrieff would recollect, 'the whole anthocyanin scene... was no longer her main interest'.<sup>2</sup> Instead, Wheldale left further active research in this field to her students like Scott-Moncrieff.

From the mid-1920s, Wheldale moved away from active research and instead concentrated upon teaching and the production of textbooks that drew together her encyclopaedic knowledge of the field. It was in this period that Wheldale obtained a Lectureship in Biochemistry at Cambridge. Already, she had produced a textbook (*Practical Plant Biochemistry*) which ran through three editions in a decade (1920, 1923, 1929). A first volume of *The Principles of Plant Biochemistry* appeared in 1931.<sup>3</sup>

<sup>1</sup> Marsha Richmond, 'Muriel Wheldale Onslow and Early Biochemical Genetics', *Journal of the History of Biology* **40** (2007), p. 414.

<sup>2</sup> Rose Scott-Moncrieff, 'The Classical Period in Chemical Genetics: Recollections of Muriel Wheldale Onslow, Robert and Gertrude Robinson and J.B.S. Haldane', *Notes and Records of the Royal Society of London* **36** (1981), p. 141.

<sup>3</sup> Muriel Wheldale, *Practical Plant Biochemistry* (Cambridge: Cambridge University Press, 1920); Muriel Wheldale, *Principles of Plant Biochemistry Volume I* (Cambridge: Cambridge University Press, 1931).