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.¹ 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.¹

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’.² 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 1931.³