Gregor Mendel's Experiments on Plant Hybrids: A Guided Study. By Alain F. Corcos and Floyd V. Monaghan. New Brunswick, N.J.: Rutgers Univ. Press. 1993. Pp. 220. $34.00 cloth, $15.00 paper.

Few publications start a revolution in the biological sciences, and fewer publications set the pattern for future research. At least three publications had such an impact on biology: Darwin—The Origin of Species, Mendel—Experiments on Plant Hybrids, and Watson and Crick—Molecular Structure of Nucleic Acids: A Structure for Deoxyribose Nucleic Acids. While Darwin emphasized the role of variation in evolution, he had no explanation for the origin or transmission of variation. The Watson-Crick double-helix model for DNA had to account for the observations and concepts of Mendelian geneticists as well as the physicochemical organization of the genetic material. Until the rise of molecular genetics, the experimental designs of studies in transmission genetics were essentially extensions of Mendel's experimental designs.

It is fitting that the first volume in a new series from the Rutgers University Press, Masterworks of Discovery: Guided Studies of Great Texts in Science, starts with Mendel's seminal paper. It should be noted that the papers by the three rediscoverers of Mendel's laws of heredity are rarely mentioned or cited.

After reading the introductory biographical chapter which presents the formal education in the natural sciences and mathematics in some detail, Mendel no longer appears as an amateur scientist. His training in the physical sciences and mathematics is probably the reason that Mendel was able to design the breeding experiments and data in a way not available to contemporary biologists. Physical scientists (e.g., Delbruck, Benzer) played a significant role in the transmission genetics of bacteria and viruses.

The detailed dissection, comments and analysis of paragraphs and even sentences in Mendel's paper, represent a new and exciting approach to understanding the mind of a scientist at work. In my opinion, this book will set the tone for the Masterworks of Discoveries series. As a teacher of genetics, I often wonder whether students appreciate the extraordinary contribution of one publication to an exciting science. Reading this book should do the job.

I strongly recommend this book to any scientist and student interested not only in genetics but in the scientific method. Moreover, the price is right for both college and high school students.

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