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Mendel in his place

Robert Olby

Mendel.

By Vitězslav Orel.

Oxford University Press: 1984. Pp.107. Hbk £7.95; pbk £1.95.

AS AN acknowledged world authority on Gregor Mendel (1822-1884), and an enthusiast for the history of genetics, Dr Orel was an appropriate choice of author for this 100-page biography in the *Past Masters* series. Only one full-length biography of Mendel has ever been written, that by Hugo Iltis, published 60 years ago. Although Iltis researched his subject thoroughly, brought to light important documents and presented a very readable account, the investigations of the past two decades have thrown fresh light on the subject, particularly upon the context of Mendel's education and scientific research. As director of the Museum Mendelianum in Brno in Moravia, Dr Orel is well placed to present an up-to-date view of his subject. Moravia now forms part of Czechoslovakia but in Mendel's day it was part of the Austro-Hungarian Empire administered from Vienna.

In such a brief sketch the author has summarized Mendel's experimental work, its reception by his contemporaries and his subsequent posthumous recognition in 1900, without becoming involved in current discussions of historical interpretation. For the most part, these topics are therefore treated in the conventional fashion: Mendel was the founder of the science of genetics, he accepted the Darwinian theory of evolution and foresaw the value of his work to that theory. That such a view is considered misleading in some quarters is not betrayed in Dr Orel's text. Instead it is the broad social and political context in which Mendel worked that is emphasized. Moravia had been influenced by the Enlightenment and the French Revolution, and education and scientific research were seen as essential to its economic and social progress. Thus the Agricultural Society in Brno was concerned with the improvement of the breeds of sheep following the example of Robert Bakewell, and of fruit following that of T.A. Knight, and meteorological data were collected to provide a basis for accurate weather prediction. In these activities the Augustinian Monastery played a prominent part.

When Mendel entered the Monastery in 1843 the Abbot was President of the Agricultural Society and an enthusiastic supporter of scientific research. Indeed, so preoccupied with responsibilities outside the Monastery did the Abbot appear to the Bishop of Brno, that the Bishop urged the termination of all teaching in the surrounding schools, retirement of the Abbot and even closure of the Monastery. For-

tunately the Abbot's appeal to Rome against the verdict was successful. In the accompanying memorandum the Order's special privileges and the achievements of its members in the field of education were stressed. Included was a mention of Mendel's devotion to science, especially physics, his teaching activity and his studies at the University of Vienna.

In the book we learn more about Mendel's performance as Abbot. This rather unhappy subject is treated frankly without recourse to special pleading in favour of Mendel. Mendel was elected Abbot in 1868, a year after constitutional monarchy had been established in the Austro-Hungarian Empire and equal rights accorded to Austrians and Hungarians, but these were not extended to ethnic minorities such as the Czechs. This caused bitterness and aligned the Czech leaders with the conservative party of landowners and churchmen, which had opposed the constitutional reforms promoted by the Liberal party. Consternation was caused when Mendel, as the Monastery's delegate, supported the Liberals. His action annoyed Czech nationalists and the other ecclesiastical representatives.

There followed the unfortunate wrangle between Mendel and the Government over the increased taxation of church properties beginning in 1874. As the only Abbot in the whole of the Austro-Hungarian Empire to persistently refuse to pay the tax, Mendel brought sequestration upon the Monastery and increasing isolation and estrangement from friends upon himself. Nine anxious years of writing protest letters to the authorities took him away from science and contributed to the decline of his health.

Whilst emphasizing the social and economic factors in Moravia predisposing Mendel to the study of hybridization, Dr Orel does not undervalue the importance of debates in nineteenth-century academic botany over the nature of fertilization and the constancy or inconstancy of species. Unfortunately he does not devote space to a more extended account of researches and discussions of the theory of hybridization in Mendel's time, instead sweeping his readers on to Morgan, Muller, Avery, Watson and Crick, and genetic engineering. Yet anyone familiar with the writings of Naegeli (Mendel's chief correspondent) and Wichura, who published his study of willow hybridization a year before Mendel on *Pisum*, will know that there was a very specific theoretical context to the subject of hybridization which is crucial to understanding Mendel's contribution and its subsequent fate. The result is that Dr Orel's Mendel is introduced very effectively as a product of progressive trends in nineteenth-century Moravia, but when the portrait is completed we are confronted not so convincingly with a precursor of modern genetics. □

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