LIFE OF MENDEL

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by

HUGO ILTIS

Translated by

EDEN AND CEDAR PAUL

WITH 10 ILLUSTRATIONS IN THE TEXT
AND 12 PLATES

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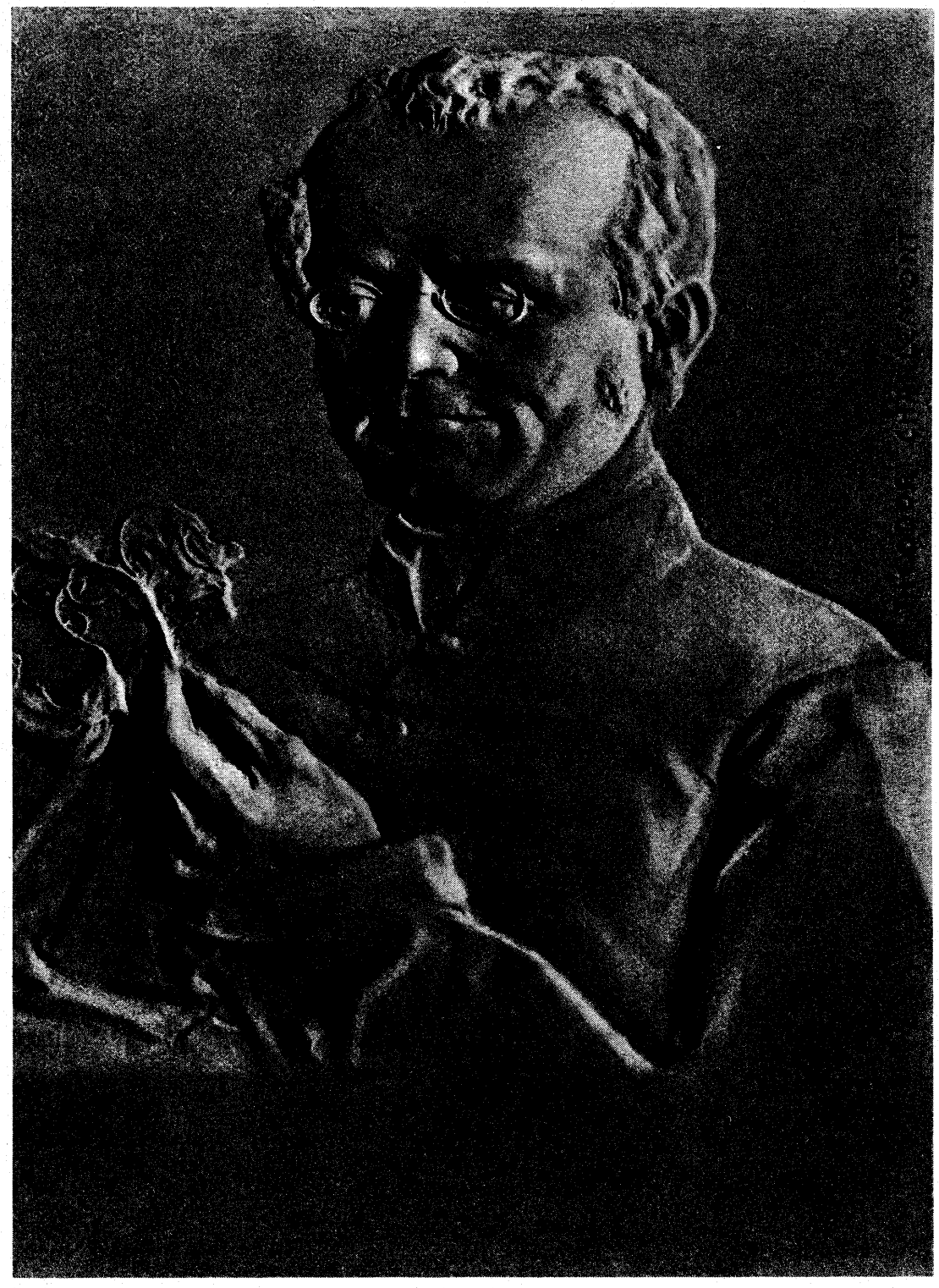

Plate I. Plaque of Gregor Mendel
by Theodor Charlemont, Vienna

TO

MY WIFE

PREFACE

FEW publications have so enduringly and variously influenced science as has the short monograph by the Augustinian monk of Brünn, Pater Gregor Mendel. Forgotten for decades, within a few years after its rediscovery it gave a mighty impetus to the doctrine of heredity; and, as mendelism, his teaching has now become the central theme of biological research as well as the foundation of manifold practical applications.

The widespread influence of his work and his own remarkable destiny combine to arouse interest in the personality and the life of this investigator who, little known in his lifetime, was one of the pioneers of science, and disclosed an unknown land before the time was ripe. It is all the more surprising that no detailed biography has hitherto been published, the sole data as yet available being contained in minor notices issued by some of his relatives.

While still only a schoolboy I read Mendel's classical monograph in the museum library of my native town of Brünn, of course without grasping its significance. When subsequently, during the days in which I was a science student, Mendel's work became so widely known and his name so famous, I made up my mind to gather information regarding his life and to contribute to keeping his memory in honour. Up till now this resolve has only borne fruit in the publication of a considerable number of short articles and popular essays dealing with Mendel's life and work.[1] If only at this later date

[1] Dr. H. Iltis: "Gregor Mendel als Forscher und Mensch, ein Gedenkblatt," Brünn, 1908; "Gregor Mendel und der Entwicklungsgedanke," "Neue Weltanschauung," 1908, No. 10; "Gregor Mendel," "Nat. Wochenschrift," No. 47, Jena, 1910; "Mendel und der Mendelismus," Sunday supplement to the "Vossische Zeitung," November 13, 1910; "Ein österreichischer Klassiker der Naturwissenschaft, ein Vorwort zur Enthüllung des Mendel-Denkmals," "Tagesbote" of Brünn, September 10, 1910; "Die Enthüllung des Mendel-Denkmals," Mendel-Festband der Nat. Ver. Brünn, 1911;

do I fulfil my purpose by the compilation of an extended biography, my excuse for the delay must be, in part that I have been much occupied with other work as a teacher of natural science in Brünn, but still more because of the interruption to all my scientific and literary activities entailed by the unhappy events of the war period—an interruption that lasted five years. At length a scientific furlough and a special pecuniary grant (for which I am indebted to the Ministry of Education in Prague) have enabled me to complete the present book.

As Mendel's biographer, however, I have had to cope with other difficulties than the foregoing, difficulties arising out of the peculiar nature of the case. My subject's thoughts were almost exclusively concerned with concrete facts, since he had little inclination for abstract reflection or for sentimentalism of any kind. He never kept a diary, and his letters throw little light on the inner man. Being a priest, he had to be extremely cautious in the utterance of his philosophical views. Holding strictly to his vows, he shunned all relationships with women; and his nature was so reserved that he even found it difficult to enjoy any sort of intimacy with his clerical or monastic brethren. Above all was he a solitary during the closing years of his life, when he was overshadowed with gloom. At the time of his death it had occurred to no one—least of all in the monastery—that he was a man of mark; and, naturally enough, the few documents he left behind him were heedlessly torn up or committed to the flames. The upshot was that twenty years after his death his personality had become no more than a vague memory almost effaced by time, and that trustworthy biographical data were wellnigh

"Gregor Mendel als Student," a lecture delivered before the Vers. dtsch. Naturforsch. u. Aerzte, Vienna, 1913; "Das Schicksal von Gregor Mendels Werk," "Tagesbote" of Brünn, August, 1922; "Ein Gedenktag der Naturwissenschaften," "Volksfreund" of Brünn, September 22, 1922; "Johann Gregor Mendels Leben," "Tagesbote" of Brünn, September 23, 1923; "Die Mendel-Jahrhundertfeier in Brünn," "Studia Mendeliana," Brünn, 1923.

unattainable. I could only make the best of such materials as were forthcoming.

To Mendel's nephews, Dr. Alois Schindler of Zuckmantel and Dr. Ferdinand Schindler of Botenwald, I am greatly indebted for the loan of letters and photographs and for much verbal information. Pater S. Bařina, prelate of the Augustinian monastery at Brünn, has likewise been good enough to supply me with biographical information. I am also grateful for various details supplied by Pater Clemens Janetschek, the late, and Pater Dwořaček, the present incumbent of Altbrünn; by Pater Gregor Jokl, the librarian of the monastery, and by various other inmates of that institution; by Professor G. Niessl (†), Professor A. Makowsky (†), Professor J. Wiesner (†) of Vienna, and Professors Liznar and Němec of Prague; by Dr. H. Neumayer of Vienna, Councillor Ludwig, Councillor Pfefferkorn, Herr Ullrich of Neuteschen, Dr. S. Weizmann, Dr. S. Schönhof, Professor A. Mader, Professor W. Weinberger, and various other acquaintances and pupils of Mendel referred to in the following pages. I have further to give special thanks for documents and valuable advice to Professor C. Correns of Berlin, Professor O. Renner of Jena, and Dr. R. Zaunick of Dresden. Finally I must express my gratitude to Fräulein Elisabeth Liebscher, who drew many of the illustrations; and to my wife and collaborator Anni Iltis (née Liebscher) for her unwearying aid as copyist and in the correction of proofs.

HUGO ILTIS

BRÜNN,
January 1924

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CHAPTER ONE

HOME AND ANCESTRY[1]

In the extreme north-eastern corner of Moravia, where to-day Germany, Poland, and Czecho-Slovakia border on one another, there lies among the foothills of the Beskiden and the Moravian Mountains a rolling upland, charming and fertile, draining into the Oder on one side and the Danube on the other, and known by the name of Kuhländchen. Politically this region lacks unity, for part of it is in Moravia and part in Silesia. It comprises the broad valley of the upper Oder, with its fragrant meadows and smiling fields, well watered by abundant rivulets. We do not know for certain whether the name of Kuhländchen derives from the fact that a fine race of cattle has long been bred here, or arose because in ancient days the territory was ruled by the Slav family of the Krawařs, whose dominion centred in the fortress of Teschen.

Heinzendorf, a village in Kuhländchen, three or four miles south of the townlet of Odrau and about ten miles from Neuteschen, was Gregor Johann Mendel's birthplace. A straggling townlet, which has changed little since the days of his youth, it lies on either bank of a stream known as the Rossbach which joins the Oder at Petersdorf. It boasts 72 house-numbers, and is almost continuous with both Klein-Petersdorf and Gross-Petersdorf. Many of the houses are of fair size, two-storeyed buildings with slate roofs, the homes of prosperous farmers. We have an account of the

[1] Heinrich Schulig, Meine Heimat, das Kuhländchen, Jägerndorf, 1908; A. Rolleder, Geschichte der Stadt und des Gerichtbezirkes Odrau, Odrau, 1902; A. Schindler, Gedenkrede auf Prälat Gregor Johann Mendel, delivered at the unveiling of the Memorial at Heinzendorf, 1902.

village as it was in 1817, five years before Mendel was born, in a manuscript work by Felix Jaschke,[1] who writes: "Heinzendorf, in Moravian called Hinczica, a village belonging to the domain of Odrau, lying southward in Imperial Silesia and in the Troppau circle, three miles from Odrau and seven from Weisskirchen, has 71 houses, 102 families, and 479 souls, possesses 665 yoke of moderately good arable, 155 yoke of meadowland, 41 horses, and 98 cows, conscripts are attached to the Count Josef Colloredo infantry regiment, is in the parish of Gross-Petersdorf. . . . In this village the inhabitants are occupied in burning lime, which is of excellent quality, being carted for many leagues in all directions. There can be no question here of improving the breed of horses or cattle, as the peasants use their beasts for draught purposes. . . . The stream called the Rossbach runs through the village, which also has a watermill with two races, known as the wood-mill. . . ."

The formerly flourishing lime-trade and the industry of cartage to a local market have decayed owing to the development of railway transport. The villagers are now exclusively occupied in agriculture and stock-raising, the latter being their main source of livelihood. The land is carefully tilled on modern lines, the fields, interspersed with forest, lying among the hills known as the Wessiedlerberg which form the lower declivities of the Moravian Mountains. In these hills the streamlets that combine to form the Rossbach take their rise. On the plateau of the Wessiedlerberg nestles the ancient township of Wessiedl, while in the valley below lie beside Heinzendorf its neighbours Petersdorf and Mankendorf. The Wessiedlerberg is faced by the Pohorschberg, which is likewise well wooded. The two form the sides of a trough through which flows the Oder, past the country town of Odrau. The inhabitants of Heinzendorf, like the

[1] Beschreiburg ganz sicherer und ungezweifelter oder im engeren Verstande gehörenden Ortschaften zu dem sogenannten Kühlandel nach der Meinung des mährischen Wanderers. Cf. Josef Ullrich, "Das Kuhländchen," 1922.

Kuhländlers in general, are slow-moving but industrious folk, meticulous at their work and in their general habits, prone to rather gloomy meditations concerning God and the universe. They are mostly of German stock, but to the east and the south they are Slavs of Polish and Czech descent. They speak a Central-German dialect which strangers find it very hard to understand.

As to the history of Kuhländchen[1] from the days of the folk-migrations down to the thirteenth century very little is known, for the scanty details which had until recently been accepted as facts have had doubt cast upon them by the latest investigations, and especially by those of B. Bretholz.[2] It seems probable that, like the other parts of the Sudetic upland, during the days of the Roman empire and subsequently it was settled by the Teutonic tribes known as the Marcomanni and the Quadi. Then another wave of folk-migration brought the Czechs into the region. According to the view that has hitherto prevailed, that of Palacky, these Slavs overran the place entirely, expelling the Teutons; but Bretholz considers that the two races became mingled or lived on side by side. Thus on the earlier theory the ancestors of the present German population must have been attracted into Kuhländchen as colonists in the days of the Přemyslids, by these, by the monasteries, and by territorial magnates of one sort and another. This resettlement by Germans is supposed to have occurred especially at the time when, after the devastating Mongol invasion (1241) and the Magyar and Kuman raids (1252 and 1253), most of the local Slavs had been killed off, and the taxable value of the land had been greatly reduced. Bretholz, however, points out that Kuhländchen suffered from the Mongolian invasion for a very short time only (no more than a few days), so that there can be no question of a serious depopulation having occurred. He considers that then as now Czechs and Germans

[1] A. Schindler, op. cit.

[2] Geschichte Böhmens und Mährens, vol. i, Reichenberg, 1921.

lived there together in amity. This, he says, accounts for the fact that Slav geographical names and German names are almost equally common: Wessiedl, Pohorsch, Jasnik, etc., on the one hand; Petersdorf, Hermsdorf, Taschendorf, etc., on the other. In the thirteenth and fourteenth centuries, the Sternbergs were the counts of the Odrau district, at the very time when the Teschen lordship was under the sway of the Krawařs. In a charter of the year 1374, there is a reference to Hinczicz (doubtless identical with the village now known as Heinzendorf) as forming part of the Odrau county, together with Jakobsdorf (Jogsdorf), Hermannsdorf (Hermsdorf), Wessele (Wessiedl), etc. The use of the form "Hinczicz" gives colour to the supposition that in those days Mendel's birthplace was inhabited by Czechs.

We see, however, that it is still a moot point whether there was already a considerable Teutonic population in Kuhländchen before the Mongol invasion, or whether German colonisation of the region was subsequent to this. At any rate, even if we accept Bretholz's theory, there is good reason to suppose that an influx of Germans from adjoining areas must have continued through recent centuries, this probably accounting in part for the prevalence of North German and South German family names, and for certain elements in the dialect. We may well suppose that the continuous infusion of fresh German blood, together with occasional crossing with Slav neighbours, must have helped to save the Kuhländlers from a racial degeneration which would otherwise have been likely enough, seeing that in the Odrau lordship inbreeding was for centuries enforced among the serfs. Only as soldiers, as priests, or as craftsmen of the town of Odrau, could males enter another lordship. It was somewhat easier for the women to migrate. Certainly it is difficult to believe that the present virile mixed stock, the stock from which Mendel's ancestors sprang, could have retained its pristine vigour had not the blood of the original German settlers been repeatedly improved by unions with

Slav neighbours and with new German immigrant strains.[1]

The name of Mendel,[2] a corruption of Emanuel ("God with us"), was formerly common among the Jews as a given name, and later also as a surname. For this reason some have supposed that Gregor Mendel must have been of Jewish descent. A strong argument against any such theory is the fact that as far back as 1611 the parochial registers of Heinzendorf and Wessiedl show an uninterrupted succession of Mendels, whereas the Jews did not acquire fixed surnames until the time of Emperor Joseph II (reigned 1765 to 1790). Moreover, Schulig tells us that in the sixteenth century the Jews were expelled from the Silesian part of Kuhländchen. There is little likelihood in the assumption that some of them, in order to avoid expulsion, adopted the Christian faith, and that the Mendels of Heinzendorf originated in this way. A. Schindler shows that there are several reasons for believing the name to be of German derivation. One theory is that it was a corruption of the diminutive of the word "Mann," which in High German is "Männchen," but in Swabian "Männle"; and actually the surname used to be written "Mendele." Another theory connects it with the Middle High German word "menden," meaning "to rejoice." On this latter view, the name Mendel must have originated as a nickname, meaning "the cheerful fellow." Spelled "Mandele" or "Mendele" the appellation is common in the earliest extant registers of the Odrau district, dating from the second decade of the seventeenth century. The spelling in question leads A. Schindler to infer that the Mendels must have been of South German (Swabian) descent, and he opines that the first Mendel to settle in Kuhländchen may have come from

[1] So persistent has been the mingling of Teutons and Slavs for many centuries that the two stocks can no longer be clearly distinguished from one another as races. All we can say is that some of the Kuhländlers speak a Germanic and others a Slav patois.

[2] A. Schindler, Die Ahnen Gregor Johann Mendels, "Unser Kuhländchen," 1914; Die Ahnen des Naturforschers Gregor Johann Mendels, "Das Kuhländchen," Neuteschen, September 1922.

Wurtemberg somewhere about 1514, as a refugee after the suppression of the peasants' rising.

However this may be, the Mendels were originally settled, not at Heinzendorf, but at Wessiedl on the plateau of the same name; and they did not move to Heinzendorf until 1683. A study of the parochial registers, and of the land registers and other seigniorial documents, has enabled A. Schindler to trace the genealogy of Gregor Mendel uninterruptedly since 1611. The oldest Protestant register of Odrau relates to the years from 1611 to 1627, and the first Catholic register of the same town begins with the year 1631. Gregor Mendel's earliest ancestors are mentioned in the former, having been Protestants, like most of the population of the region at that date. The name of Mendel does not appear in the Heinzendorf land register belonging to the period of the Thirty Years' War (1618–1648). The Heinzendorf parochial register does not go back so far as this, but in the Protestant parochial register of Wessiedl are recorded the names of the members of the first three positively known progenitors of Mendel. The founder of the line was Konstantin (Stantke) Mendele, who died before 1613. He had two sons, Martin and Blasius Mendele. In the case of the former, the name is variously spelled as follows: Marten Mendtle, 1611; Martin Mendel, October 9, 1613; M. Mendela, June 31, 1616; and M. Mendula, September 17, 1615. Each pastor had his own variant. Mendele and Mandele are the commonest forms, Mendula being a Latinised (or perhaps a Slav) spelling. The other names which, in the register, adjoin the name of the first Mendel, are mostly Slav; and indeed Slav forms predominate in the register both as regards baptismal names and as regards surnames. The population of Wessiedl in the beginning of the seventeenth century was still mainly Czech, so that there are likely to have been many mixed marriages among Gregor Mendel's forbears. We can assume with considerable probability that he was partly of Slav descent.

Stantke Mendele was most likely a peasant of Wessiedl. Beside the entry relating to the marriage of his younger son, Blasius, on February 3, 1613, to Susanna Wolf, daughter of the deceased Simon Wolf, who had been a peasant of Wessiedl, there stand in the parochial register the words "Gott segne sie" (May God bless them), this signifying, either that Stantke was a very pious man, or that he was a highly respected member of the community. The marginal note in question is found only thrice in the whole register. From the number of godfathers and godmothers named we may infer that Martin Mendel, too, was well off, in good repute, and certainly a "grosser Bauer" (prosperous farmer). His son, Georg Mendel, did not take over the paternal farm, having in 1643 married Katharina Ondra, the daughter of a freeholder. When this name "Ondra" occurs elsewhere in the register we find, if the pastor happens to be a Teuton, the German spelling "Anders." Katharina's father, Johann Ondra, is described as "stary vogt," this implying that he had held some such office as "parish overseer" or "elder" or "headman." From this father-in-law of his, who farmed in Wessiedl the peasant-holding no. 25 in addition to the freehold no. 24, Georg Mendel took over the former. Married twice, he had eight sons and three daughters. Only the daughters remained in Wessiedl, finding husbands there. The sons, more migratory, transferred to Heinzendorf, Klein-Petersdorf, and Odrau, respectively. Thus the name of Mendel disappears from the Wessiedl records. But it was one of Georg Mendel's sons who founded the Heinzendorf line of the family. This was the fifth child, Wenzel, who in 1684, having married Marina Wellert of Kamitz near Odrau, bought the Heinzendorf peasant-holding no. 6. He, too, had many children, and was naturally unable to establish them all in peasant farms. His son Andreas was thus no more than a cottar. But Andreas' son, Anton Mendel, great-grandfather of Gregor Mendel, also beginning life as a cottar, was able to raise himself in the social scale by

industry and to acquire the Heinzendorf peasant-holding no. 58, the one on which Gregor Mendel was born. This holding passed to Anton Mendel's second son, Valentin.

Anton Mendel the second, son of Valentin Mendel and father of Johann Gregor, was born at Heinzendorf on April 10, 1789. For eight years he served as a soldier, playing his part in the closing wars of the Napoleonic epoch, and thus seeing the world.[1] His mind having been thus enlarged, it was natural that when he returned home he should turn his experience to account in the betterment of his farm and dwelling-place. Soon after taking over from his father, he had the old wooden house pulled down, building a new and more durable structure which still stands almost as first erected, though a wing was added in 1922. It is a comfortable-looking edifice, with a tiled roof. Sloping down towards the high road and the stream is a large orchard, most of which was planted by this same Anton. To-day, however, as I have seen for myself, the orchard has been somewhat neglected, and has been allowed to run rather wild. In a corner of the orchard are still to be found old tree-trunk hives, great stumps hollowed for the use of the bees, but it is unlikely that these have been used since Gregor Mendel's time. Anton Mendel was industrious and thrifty, but his improvements ran away with a good deal of money, so that he could not put much by. In 1818 he married Rosine, daughter of Martin Schwirtlich, a gardener in Heinzendorf. From his mother Johann Gregor inherited some of his character traits, for he seems to have been good-natured, quiet, and modest. Probably his talent came also from the mother's side of the family. One of Rosine's uncles, Anton Schwirtlich,[2] son of a cottar, though only self-taught, had acquired the elements of a good education. Having then

[1] A. Schindler, Gedenkrede, 1902. (Many of the data in this oration were furnished by Schindler's mother, Johann Gregor's sister.)

[2] A. Schindler, Anton Schwirtlich, der erster Lehrer von Heinzendorf, "Das Kuhländchen," Neuteschen, December 1922.

travelled and gathered experience as a soldier, he was able after his return to Heinzendorf to establish himself as teacher in his native village, carrying on this work from 1780 to 1788 before any sort of public elementary school had been inaugurated in the place. In gifts and diligence he resembled his great-nephew Johann Gregor Mendel, and would probably have attained distinction in more favourable circumstances. Among Mendel's ancestors, moreover, there were a good many other men of exceptional efficiency. Some of these held positions of trust as magistrates, burgomasters, or parish councillors. Others, like many of the semi-peasants of Wessiedl, adopted gardening as a profession, and this implied both taste and aptitude in a region where stones flourished more abundantly than flowers. Schindler points out that in the Wessiedl registers there is mention of no less than three hereditary lines of gardeners, and that the founder of these in each case was an ancestor of Johann Gregor. Although the names vary (being sometimes Greger, sometimes Ržiha, sometimes Zahradnik, and sometimes Gärtner), they all really belonged to one great family, the name being now written in German (Greger), now in Czech (Ržiha), and now replaced by an appellation denoting their craft. They were professional gardeners in the service of the lord of the manor, and the last of them named in the register is specifically described as a flower-gardener. He must have been the chief of a big undertaking; for Schebor Praschma, the Odrau territorial magnate, had not only a big flower-garden on his original estate, but had in 1618 made a considerable purchase of land to be devoted to horticulture. The hereditary fondness for flowers and gardening cropped up once again in Gregor's father Anton Mendel, who planted the huge orchard adjoining his house.

Another of the Kuhländlers' qualities formed part, it would seem, of Gregor Mendel's hereditary make-up. I refer to the tenacity with which they were wont to resist any abuses of power on the part of the landed gentry. Schindler records

a number of lawsuits showing the way in which the peasants were always ready to defend themselves against arbitrary exactions and the like, sometimes carrying their case up into the supreme courts and even appealing to the emperor in person if their rights were seriously threatened. How closely this reminds us of the persistent campaign waged by Mendel, after he became prelate [abbot], against the taxation of monasteries, considering as he did the law upon which such taxation was based to be fundamentally unjust. The fact that this same tenacity manifested itself also in the working out of his original ideas and in the prosecution of his researches, may reconcile us in some degree to the disastrous effects which the monastery taxation affair had upon his mental stability and his work.

Gregor Mendel's bodily habitus likewise resembled that of his ancestors. The men of these mountain regions, not excepting those who dwell in Wessiedl to-day, are usually short and stocky. The Mendels, in particular, seem to have been almost all of small stature. Schindler mentions that many of them were of very poor growth, though without any impairment of industry or intelligence. A broad forehead, blue eyes, and an inclination to stoutness, were not only characteristic of the ancestral line, but are traits in which many of the surviving Mendels closely resemble Johann Gregor.

A. Schindler has compiled the following table showing the direct ancestry of Gregor Mendel as far as it can be traced, namely for eight generations:

1. Konstantin (Stantke) Mendele, of Wessiedl, who died before 1613.
2. Martin Mendele, of Wessiedl, whose wife was named Anna. The marriage took place before 1613.
3. Georg Mendele, peasant, of Wessiedl no. 25, who in 1643 married Katharina Ondra.
4. Wenzel Mendel, peasant, of Heinzendorf no. 6, who on February 18, 1684, married Marina Wellert of Kamitz.

5. Andreas Mendel, cottar, of Heinzendorf no. 11, who on May 5, 1720, married Marie Blaschke.
6. Anton Mendel, cottar, of Heinzendorf no. 26, who on May 26, 1748, married Elisabeth Weiss.
7. Valentin Mendel, peasant, of Heinzendorf no. 58, who on September 3, 1778, married Elisabeth Blaschke.
8. Anton Mendel, peasant, of Heinzendorf no. 58, who on October 6, 1818, married Rosine Schwirtlich.
9. Johann Gregor Mendel, born July 22, 1822.

CHAPTER TWO

YOUTH

THE first child born to Anton and Rosine Mendel was a daughter, Veronika. Then, on July 22, 1822, as second child, came a boy, who was christened Johann after his paternal uncle. The additional name of Gregor, by which he was known during his monastic life, was not given to him until much later, when he became a member of the Augustinian order. It is from Mendel's relatives that we learn the date of his birth to have been July 22nd, St. Magdalen's day, and that his birthday was always kept on that day. But in the Petersdorf parish register, and on the baptismal certificate—which bears the names of Karl Kuntscher, peasant, and Juliane Walzel, peasant, of Heinzendorf, as godfather and godmother respectively—the date of birth is given as July 20th. The question as to the real date must, therefore, be left open, as not infrequently happens in the case of celebrated men.

In 1829 a third child was born, a girl, Theresia. She was a merry little soul, resembling her brother Hans in face and disposition, and was his favourite companion during the years of his childhood. The elder sister, Veronika, had a gloomy aspect, being in this respect like her father Anton, who had a sombre cast of countenance.[1] As far as appearance went, all that Johann Mendel inherited from his father was his small stature. The gentle, peaceful visage and the high forehead came from the maternal side. Veronika was always lean; but both Hans and Theresia inclined to be stout, even from early days. It would seem, then, that in the Mendel family there was plainly manifest the working of the laws of heredity which Johann Gregor Mendel was in due time to discover. Mutatis mutandis, Goethe's "I have my father's stature,

[1] Dr. A. Schindler informs me of this by letter.

his serious inclination; my mother's cheerful nature, and gift, too, for narration" can be applied to Gregor, who was likewise a living example of the "mendelising" of characters. He, as we have seen, was a mingling of paternal and maternal traits, whereas his elder sister was like the father both in appearance and disposition, and the younger sister like the mother in most respects. These remarks are confirmed by a study of a photograph of the two sisters, kindly lent me for reproduction by A. Schindler (see Plate II). The elder, Veronika Sturm, is thin and serious-looking; the younger, Theresia Schindler, is plump and has a merry twinkle. Behind them stands Leopold Schindler, Theresia's husband, and father of Drs. Alois and Ferdinand Schindler.

The Heinzendorf peasant-holding no. 58 comprises a large garden lying between the house and the road, and thirty yoke of undulating ploughlands and meadows. As previously mentioned, Anton Mendel, Johann's father, had a great fondness for fruit-growing. This hereditary trend was doubtless fostered by the circumstance that Pater Johann Schreiber (parish priest of Gross-Petersdorf from 1802 to 1850), who did so much to encourage fruit-growing in the region, not only had the schoolchildren instructed in improved methods of cultivation, but was always ready to give advice and active help to the fruit-growers among his neighbours and parishioners. Whenever Anton could spare time from the hard work of his farm and from the exactions of the corvée, it was a delight to him to graft his fruit-trees with finer sorts, some of which were supplied him by Pater Schreiber from Countess Waldburg's garden,[1] while others came from Troppau or Olmütz. Little Johann often worked with his father in the orchard. In this fruit-garden at Heinzendorf there was awakened in the growing lad a joy in nature; there was grafted on the gnarled stem of the Mendels a fine shoot that would one day bear a rich harvest. Down to the end of

[1] F. Schindler, Gregor Johann Mendels Beziehungen zur Heimat, "Das Kuhländchen," July 1922.

his life, even long after he had ceased to take any practical interest in botanical science, Gregor Mendel retained his fondness for fruit-growing. Many of the exceptionally good varieties of fruit-tree raised by him in the monastery garden at Altbrünn bear witness to the fact that the impressions he received in childhood were more lasting than any others.

As a boy Johann Mendel was short, but broad-shouldered and sturdy. He was handy at the work on the farm, much to the satisfaction of Anton, who hoped that when the time came he would be able with a good conscience to leave the holding to his only son.

During the last years of the eighteenth century, the Heinzendorf children were supposed to go to school in Petersdorf. But the teacher there was inefficient, and the distance was considerable. In those days, too, the pressure of the corvée was such that the peasants needed their children for work in the fields. The consequence was that hardly any one in Heinzendorf could read or write. Still, as recounted in the previous chapter, the work of Rosine's uncle Anton Schwirtlich as a private teacher from 1780 to 1788 had given the Heinzendorfers a grasp of the value of education, so they applied for and secured permission to build a schoolhouse of their own. This was completed in 1796, and Thomas Makitta from Gross-Glockersdorf was installed as teacher. Thenceforward until 1839 the excellent man continued to instruct the schoolchildren of Heinzendorf, who were round about eighty in number.

In the village schools of the district the children were, at the desire of the lady of the manor, Countess Waldburg, taught natural history and natural science in addition to the ordinary essentials of elementary education, although the former branches were not at that date part of the curriculum even in the high schools. In a garden attached to the Heinzendorf school, the children learned the essentials of fruit-growing and beekeeping. In a report sent by Pater Friedl, school

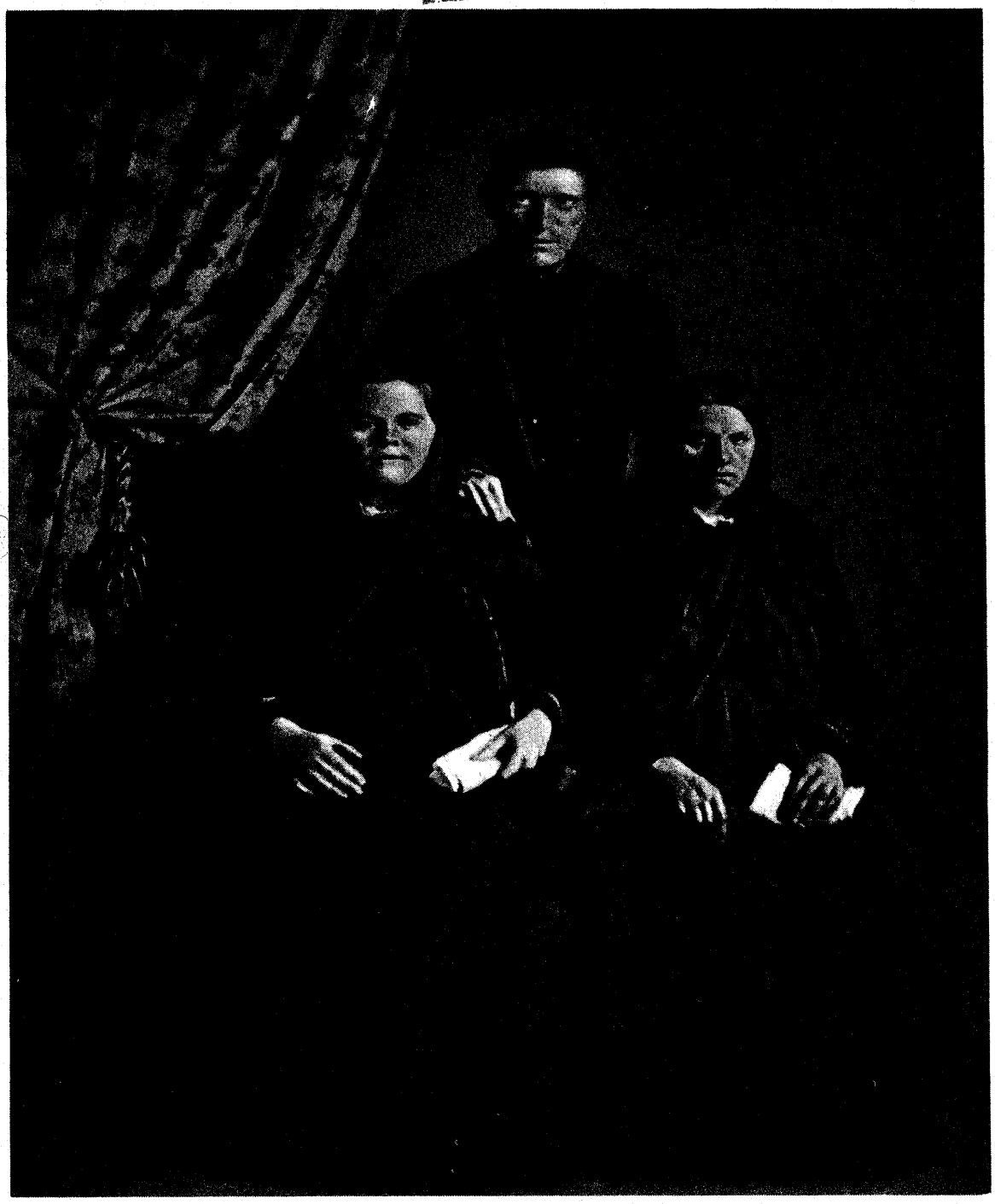


Plate II. Photographs of Mendel's Sisters and Brother-in-law

inspector, to the archiepiscopal consistory we read: "Pastor Schreiber is chiefly responsible for the growth of this scandal." Beyond doubt the worthy Schreiber, who continued his labours at Gross-Petersdorf until 1850, was chiefly *responsible for "the growth of this scandal" in the heart of young Johann* Mendel, as schoolboy, divinity student, and cleric—a fact for which, down to our own day, we have every reason to be thankful to the parish priest.

Thomas Makitta was quick to recognise the exceptional talent of his pupil Johann Mendel, and spoke to the lad's parents about the matter. Two of the Heinzendorf boys had just been sent on to a higher school at Leipnik, a town about thirteen miles away. This school had four classes, and a curriculum resembling that of one of our contemporary middle schools, being designed to train boys for "the arts, the sciences, and commerce." In the holidays the two village lads were bubbling over with information regarding their school experiences at Leipnik, with the result that young Johann was fired with a longing for more advanced study, and began to pester his parents to that end. His mother, after the manner of mothers, had already dreamed of a great future for her boy. He was not to be a mere peasant like Father Anton, was not to waste his energies upon toiling on the land. She supported the urgent pleadings of Johann. Anton was loath to abandon his own plan of leaving the farm to his son, but could not deny that study offered the only chance of escape from the narrows and hardships of peasant life (before 1848). Like all his fellows, he himself had, under the corvée, to work for the lord of the manor three days every week—a day and a half with the horses, and the rest of the time manually. In the end, therefore, he agreed that, as an experiment, Johann, now eleven, should go to the school at Leipnik, entering the third class there. Although Johann Mendel was unquestionably one of Makitta's best pupils, the boy's abiturient report (still to be seen at the Heinzendorf elementary school) has in it two mere "goods" in addition to a couple of "very goods."

Thomas Makitta was a cautious fellow, and thought it would be better to give his colleagues at Leipnik a pleasant surprise rather than run the risk of disappointing them. As things turned out, Johann did him every credit at Leipnik. In the Leipnik school records for the year 1834 we find frequent mention of him as a pupil in the third class.[1] For diligence he is always marked "very good" and his progress is recorded as "eminens." A marginal note describes him as top of the class. Outstripping his schoolfellows, he was already by his formidable industry smoothing his road to further study, with the result that on December 15, 1834, he was, with his parents' full approval, admitted to Troppau High School. The headmaster of that institution was Pater Ferdinand Schaumann, an Augustinian from the monastery in Altbrünn. In the abiturient report under date August 7, 1840, we read that Johann Mendel had been one of the best pupils in the school, being marked super-excellent in almost all branches of study (I em = prima classis cum eminentia). In the report relating to the third grammar class we read: for the first term, "III inter eminentes" (tertius inter eminentes = the third among the best); for the second term, "I accedens" (the second best). For the second term in the fourth grammar class the report is "I praemif. access" (the first after the prizewinners).

In the four lower classes, known as the "grammar classes," Mendel's teacher was Professor Thomas Zenker; in the two higher classes, where "the humanities" were taught, Professor Martin Beck.

Johann's parents were hard put to it to find the school-fees. Only two generations before had the Mendels succeeded in working their way up again from the status of cottar to that of peasant. The money Anton had been able to save had been devoted to improving farmstead and land. There was little or no ready cash. At Troppau the boy was entered as on "half rations." Whenever the carrier drove from Heinzendorf to

[1] Josef Ullrich, Gregor Johann Mendel, a reprint from the "Illustrierter Neutitscheiner Volkskalender," 1907.

Troppau, more than twenty miles away, Anton and Rosine sent their son a supply of bread and of butter. Young Johann must have had a far from easy time at school, and must often have been gnawed by hunger as he sat over his books, so that the grim earnestness of life was brought home to him. In his brief autobiography (penned as an accompaniment to his request for admission to the examination for high-school teachers), he writes: "During 1838, as the outcome of a rapid succession of mishaps, his parents [the autobiography is in the third person] were rendered unable to pay his school expenses, and the scholar, then sixteen years of age, was unfortunately compelled to fend for himself. This year, therefore, he attended the course for 'school candidates and private tutors' at the upper school in the Troppau circle; and, having secured a 'specially commended' in the examination, he was able during the study of the humanities to maintain himself after a fashion." With one exception the report on Mendel's work during the before-mentioned course describes him as having been "very good" in every branch. The exception, quaintly enough, when he is only reported on as "good," concerns the lectures on religion.

He worked his way through the six classes of the high school with the thoroughness which was one of his most salient characteristics and with unremitting diligence. Not even during the summer vacation did he get a real rest, for he had to lend a hand in the harvest-fields and the barn. At times his neglected body refused to obey the behests of the imperious mind. Indeed, after the exertions, privations, and stresses of the year 1838, he became seriously ill, and was forced to go home at Whitsuntide 1839. Not until September of the same year did he return to school. Naturally he fell back a little in his studies, owing to his illness and to calls made on his energies outside school, but he remained a distinguished pupil nonetheless. In 1840 he was admitted without supplementary examination to the second class for the study of the humanities, the highest class in the school; and when he left on August 7th

it was with a certificate acknowledging not only his industry but his all-round talent as well.

For reasons explained in the preface, a biography of Gregor Mendel can scarcely be anything more than a record of hard fact. In the absence of documents, there is little beyond the verbal reports of friends and relatives to tell us about his thoughts and his feelings. All the more interesting, therefore, is a sheet of paper yellowed with age on which are inscribed two poems composed by the boy during his school days. There is no doubt as to their authenticity, for the handwriting is unmistakable, and they were found by Dr. Ferdinand Schindler among the relics of Johann's youth which his sister Theresia (Ferdinand's mother) had affectionately preserved. Written in unrhymed verse, which naturally stumbles here and there, they show a range of thought and a felicity of expression that indicate the genius which was to rise superior to the cares and troubles of daily life. Erasures and corrections make it clear that the poems are originals, and not merely "elegant extracts." Neither poem bears a title, but obviously they constitute a united whole, being respectively devoted to a glorification of the art of printing and to the fame of its inventor. [An almost line-for-line translation follows]:

Wherefore was man created?
Wherefore did, into a pinch of dust,
An unfathomably exalted Being
Breathe the breath of life? Assuredly
The Most High, who so wisely
Shaped the round world, and who
For his own sage purpose fashioned the worm out of dust
Created man also
For some definite reason. Assuredly
The capacities of the mind
Prove that for it a lofty aim
Is reserved.—Unceasing toil,
The ennoblement and development of his energies,
These are man's lot here below.
But unfading are the laurels of him
Who earnestly and zealously strives
To cultivate his mind,

Who with the full light of his understanding
Seeks and finds the mysterious depths of knowledge,
Of him in whose development the germ
Of glorious discovery implants itself,
Nourishing him, and sending abundant blessing
To the thirsty crowd of mankind—
Yes, his laurels shall never fade,
Though time shall suck down by its vortex
Whole generations into the abyss,
Though naught but moss-grown fragments
Shall remain of the epoch
In which the genius appeared.
How gloriously will the storm of change (?)
Of the song of rejoicing resound!
Fame will delight to celebrate this work,
And will strive to crown it!
What gratitude, in days to come,
Will future generations show
When they contemplate the art of Guttenberg.

You letters, you types, fruit of my research,
You are the rock foundation
On which I shall establish and upbuild
My temple for all time.
As the master willed, you shall dispel
The gloomy power of superstition
Which now oppresses the world.
The works of the greatest of men,
Which now, of use only to the few,
Crumble away into nothingness,
You will keep in the light and will preserve.
For in many a head still wrapped
In slumber, your strength will foster
The great, the clear, powers of the mind.
In brief, your coming cannot fail
To create a new, a better life.
May the might of destiny grant me
The supreme ecstasy of earthly joy,
The highest goal of earthly ecstasy,
That of seeing, when I arise from the tomb,
My art thriving peacefully
Among those who are to come after me.

"As the master willed, you shall dispel the gloomy power of superstition which now oppresses the world." These words penned by the schoolboy foreshadow the intellectual trend of

the grown man, of him who, even in the monk's cowl, would continue to think unfettered thoughts, and would pursue the search for truth regardless of established dogmas.

Johann Mendel's school days were over. Philosophy (so-called) which is taught in the two highest classes of the modern high school, formed no part of the Troppau curriculum. He must seek that knowledge elsewhere. "It was the young student's first care," writes Mendel in the before-mentioned autobiography, "to make sure of the means requisite for the continuation of his studies. Since philosophy was taught at the Philosophical Institute in Olmütz, he did his utmost to secure work as private tutor in that city, but failed to do so for lack of friends and recommendations. Nor were his parents in a position to supply him with the necessary funds."

Anton Mendel had, indeed, improved his property, rebuilt his house, and bettered his standing in Heinzendorf. He was a respected member of the parish council; and so was his brother Johann, who had returned home after prolonged service in the army. But, apart from the fact that the rebuilding of the farmhouse had swallowed up all his ready money, in 1838 Anton had a serious accident which gravely affected the welfare of the family. During winter work under the corvée his chest had been partially crushed by a rolling tree-trunk, and from this time his health began to fail. Being no longer equal to carrying on the work of the farm, he made over the holding to his son-in-law Alois Sturm, who had married Veronika, the elder of the two girls. The farm still belongs to the Sturms to-day. In 1842, Anton retired to Ausgeding. The contract whereby the farmstead and land were sold by Anton Mendel to Alois Sturm recently came to light. Some of the details are interesting. The purchase price was 400 fl. convention-coins. A full inventory and a list of the live-stock were appended to the document. There were two horses, four cows, one heifer, one bullcalf, and poultry of various kinds. An old-age pension was to be paid to Anton.

Provision for the son was made by clause 6, which ran as follows: "The purchaser shall pay to the son of the seller, Johann by name, if the latter as he now designs should enter the priesthood, or should he in any other way begin to earn an independent livelihood, the sum of 100 fl., say one hundred gulden convention-coins, and also annually, so long as Johann is still engaged at his studies, shall pay the father the sum of 10 fl. convention-coins as an aid to the cost of study, and shall also defray all the expenses connected with the first mass. But should the son John be prevented by any mishap from taking priest's orders, or should he in any other way be hindered from earning an independent livelihood, he shall be entitled to free quarters in the reservation room, and in every field after his father's death to the use of one measure [Metzel] of arable." The purchaser had further to provide a dowry for Theresia, this being the last clause in the contract, which was signed on August 7, 1841, by eight witnesses in addition to the principles.

We see that the parents wished to make the best possible provision for their son, but also that it was beyond their power to supply him with enough money for the untroubled pursuit of his studies. Even in those days of universal cheapness, an annual income of ten gulden convention-coins was pitifully small. Lacking further help from home, and without a friend in the strange city, he was likely, at eighteen, to be forced to abandon the career he had chosen. "Distress at the prostration of his hopes," says the autobiography, "and the gloomy outlook upon the future, had so marked an effect upon him that he fell sick, and was compelled to spend a year with his parents for the restoration of his health." But during the winter term of the year 1840–1841 Mendel, though still in poor case physically, made good progress at Olmütz in the study of philosophy. The records of the second term, however, inform us that he had had to withdraw from the examination owing to illness. During the academic year 1841–1842 he was again able to attend the first class in philosophy.

Gregor Mendel's prospects of continuing a life of study were slender indeed. The veriest trifle might have resulted in there being one peasant the more and one immortal man of learning the less. But at this juncture Theresia, his younger sister, who was still unmarried and was greatly attached to him, wishing to give him another chance of the life after his own heart, voluntarily renounced a share of the family estate which her parents had put aside for her. Mendel never forgot what his favourite sister had done for him, and subsequently repaid her kindness with abundant interest by his care for her three children, the brothers Schindler.

In 1841, therefore, Mendel returned to the study of philosophy at Olmütz, and was now able, after taking much trouble in the search for pupils, to provide for his most essential needs with the money earned by private tuition. Except for this necessary interruption, he devoted his whole time to attending lectures and to appropriate reading, getting the best possible reports in almost all subjects, although pure philosophy seems to have been his weakest side. The autobiography informs us that "with the devotion of his undivided energies, he was able to get through the two-year course of philosophy." But in the second term of the second year he was again ill for a while, and had to submit himself for a supplementary examination, which he passed with flying colours in all branches of instruction. Thus at least three times during his student days he was so ill that he had to take to his bed. We have no information as to the precise nature of these illnesses. Speaking generally, however, we know that prolonged illness in young people, and especially at puberty, is apt to make the sufferer reflective, to turn the thoughts inward. The lives of many distinguished thinkers and of many great imaginative writers show us that a mind of unusual keenness and clarity can often be housed in a debile body. The phrase "mens sana in corpore sano" does not apply to genius.

The Olmütz Philosophical Institute was affiliated to the university. Some of the teachers were men of high repute.

Religion, philosophy, elementary mathematics, Latin literature, and physics, were compulsory branches of study; universal history, natural history, and the science of education, were optional. It was characteristic of the spirit of the educational authorities in those days before the revolution of March 1848 that they should regard the latter subjects of instruction as essential only for sizars, exhibitioners, foundationers, and those whose fees had been entirely remitted; as compulsory for them alone. Mendel did not come within any of these categories, for we may presume that, since he was though very poor the son of a man who farmed a peasant-holding, his fees cannot have been remitted. For him, therefore, history and natural science were "optional," and he did not take the courses. In view of the educational methods of the time, this was probably no great loss.

The head of the institution was a man of aristocratic birth, Canon Eduard R. von Unckrechtsberg, who seems to have been little concerned to promote the welfare of Johann Mendel, though the latter was his best pupil. Dr. Michael Franz von Carnaval, professor of classical learning and literature and of aesthetics, was also of noble blood. Dr. T. Eichler was professor of religion. Dr. Josef Wittgens, a man of little account and the only one of his teachers regarded by Mendel as inefficient, was professor of philosophy. Dr. Johann Fux, author of *Vorlesungen über reine Mathematik* (a textbook used in the college), was professor of mathematics. The professor of agriculture and natural history, courses which our student did not attend, was Dr. Johann Helcelet, who later removed to Brünn, where Mendel for a time acted as his substitute. It is probable that at the Olmütz Institute the course in which Mendel was chiefly interested was that of physics, the subject on which Professor Friedrich Franz lectured. After teaching physics for nearly twenty years at the Philosophical Institute in Brünn, Franz had recently had a call to Olmütz University, in succession to A. Baumgartner, who was subsequently to give Mendel's life a decisive turn. Professor Franz was an

able physicist.[1] He took a lively and practical interest in daguerreotype, then a recent discovery, and was mainly instrumental in introducing the new art into Moravia. Later he was appointed headmaster of Salzburg Modern School; and ultimately (being, like most educationists at that time, in orders) prelate of Neureisch monastery.

When he had finished the course of philosophical studies, Mendel came to the conclusion "that it had become impossible for him to continue such strenuous exertions. It was incumbent on him to enter a profession in which he would be spared perpetual anxiety about a means of livelihood. His private circumstances determined his choice of profession" [from the autobiography]. He asked Professor Franz's advice and help. While teaching at Brünn, Franz had lived in the Altbrünn monastery, and was acquainted with many members of the Brünn monastic community. He had just been asked to select from among his pupils young men whom he could recommend as candidates. On July 14, 1843, he sent the following letter (the recipient's name is unknown), which was decisive as to the fate of Johann Mendel:

"HONOURED COLLEAGUE AND VERY DEAR FRIEND,

"As a result of your letter of June 12th, I have made known to my pupils the Right Reverend Prelate's decision to accept satisfactory candidates at your monastery. Up to now, two candidates have given me their names, but I can only recommend one of them. This is Johann Mendel, born at Heinzendorf in Silesia. During the two-year course in philosophy he has had, almost invariably, the most unexceptionable reports, and is a young man of very solid character. In my own branch he is almost the best. He has some knowledge of Czech, but not sufficient, so he is willing to devote himself to the mastery of the language during the years of theological study. Please convey this information to the Right Reverend

[1] C. Würzbach, Biographisches Lexikon des Kaiserthums Oesterreich, 1857–1891.

Prelate, with my respects, and ask him what he would like me to do about the matter. . . .

"Your sincere friend,

"FRIEDRICH FRANZ."

Thus it came to pass that Johann Mendel went to join the Augustinians at Altbrünn. Before being accepted by them on September 7, 1843, he was medically examined by Dr. Schwarz, a Brünn practitioner, and found to be perfectly healthy, having, it would seem, completely recovered from the ailments that had troubled him during his student life. In a document written by Johann Mendel and signed by both his parents the latter give their consent to his choice of the clerical profession and express the hope that he will faithfully and conscientiously fulfil his new obligations. Also, before being accepted, he had to be transferred from the Olmütz diocese by an archiepiscopal decree under date September 27, 1843. Finally on October 9, 1843, he was admitted to the Königinkloster as novice and assumed for his monastic appellation the name of Gregor, which thenceforward he used before his baptismal name. Three other novices, Wilhelm Rösner, Johann Rambousek, and Anton Ciganek, were simultaneously received.

CHAPTER THREE

THE KÖNIGINKLOSTER AND THE AUGUSTINIAN MONASTERY

ALTBRÜNN is the name given to that part of the city of Brünn, the capital of Moravia, which lies at the foot of the Spielberg. Formerly a distinct township, it now comprises the fourth of the four subdivisions of Brünn. The Königinkloster is situated in the middle of this Altbrünn quarter. The place was originally founded in 1322, as the Maria Saal nunnery,[1] by Queen Elisabeth, widow of Wenceslaus and of Rudolf, kings of Bohemia. At this date was begun the building of the nunnery church, dedicated to the Assumption of the Blessed Virgin, one of the finest among the ancient buildings in the country. It is a cruciform edifice of dark-red brick, in fourteenth-century Gothic, and is surmounted by a graceful belfry. It contains ten baroque altars, one of them being the high altar with its magnificent altar-piece. Both the monastery and the church were devastated by the Hussites. The last extensive restoration was effected in 1762, by Abbess Antonia von Ulrici.

The Augustinian monastery of St. Thomas, founded in 1359 by Margrave John, was in 1793 (sixty years before Mendel became a novice) transferred to the Königinkloster at Altbrünn from what are now the government offices adjoining the church of St. Thomas—the place being no longer used as a nunnery. Considerable renovation of the dilapidated structure, substantially a rebuilding, was requisite. Thus originated part of what is now the prelacy, together with the refectory and the library with the clock-tower. Subsequently a good deal of minor reconstruction was undertaken at various times. For instance, a few decades ago, the refectory was enlarged and redecorated. On the whole, however, the monastery still looks

[1] Gregor Wolny, Kirchliche Topographie von Maehren, Brünn, 1856–1866.

much as it must have looked in Mendel's time. Its surroundings, on the other hand, have changed a good deal. In the days of Gregor Mendel's novitiate the square known as the Klosterplatz was surrounded by small and ancient houses, and lay at the edge of the town. Now the tide of modern building has flowed round it, and huge flats and school-houses stretch along one side. Again, whereas fairs used to be held in the Klosterplatz, with all the attendant riot of booths, showmen, and popular amusements, to-day quiet prevails in the garden that surrounds the lovely Mendel monument in what is now known as the Mendelplatz (see Plate XII).

The monastery building, which adjoins the church to the south and south-west, having but one storey and an attic above the ground-floor, but covering a good deal of ground, looks rather squat. From the Mendelplatz the approach is through a gateway leading into the front court, now laid out as a garden, but where in Mendel's time there was an avenue of ancient limes. Facing us is the early-baroque front of the monastery, its windows giving on the square. In the first floor are the prelacy and some guest-chambers; on the ground-floor, the quarters of the prior and those of the incumbent of Altbrünn. To the right is the old monastery church already described, and this is connected with the prelacy by a walled alley-way. A door in one of the walls gives access into the monastery quadrangle. Behind the monastery building, beneath the little clock-tower that surmounts the library, is the strip of garden in which Mendel made his experiments on the crossings of the pea. From one of the windows of the library there still gleam the meteorological instruments used by him in his observations. The quarters of the monks and lay-brothers, together with the kitchens and other offices, surround the courtyards.

A walk through the interior of the monastery and the gate opposite the church leads us past the porter's room to a wide carpeted staircase at the top of which are the prelate's quarters. Here Mendel lived from 1868 till his death in 1884. The

visitor wanders through a suite of large, well-lighted rooms with parquet floors. They are sumptuously furnished in the rococo and middle-class style. Some of the tables are fine pieces, inlaid with ebony and mother-of-pearl. On the walls hang oil-paintings of the various prelates; Mendel, too, confronting us in a picture painted in the eighties, showing him in full canonicals with gold chain and cross. This is known as the "Great Prelate Portrait." The expression of countenance is dignified and rather severe (see Plate IX). The rooms of which we have just been speaking are, of course, the "State apartments." Adjoining them are the prelate's more modest study and living rooms, and also the guest-chambers. In the prelacy and in the passage beside it hang all the pictures belonging to the monastery, some of which are valuable old masters. The ground-floor of the main building contains the refectory, a fine hall, furnished in the Old-German style. Here the monks assemble for meals, sitting at a long table presided over by the prelate, while the novices have a smaller table with the master of novices at its head. All stand behind their chairs while grace before meat is said, the devout formulas echoing from the vaulted roof. Then they seat themselves at a function which has always been important in monastic life, and is to-day more so than ever.

On the first floor are two large rooms in which a library of 20,000 volumes is housed. Besides ordinary printed books, it contains a number of interesting manuscripts and precious incunabula. Here, too, is Mendel's telescope, through which for many years he made his observations of sun-spots.

Behind and to the right of monastery and church are quiet gardens stretching towards the western slopes of the Yellow Mountain. A winding path leads through orchards of fine fruit-trees, past Mendel's beautifully situated beehouse in its setting of wild vines, to the high wall which encircles the retreat. From the height now reached there is a good view of the green declivities of the famous Spielberg, in whose gloomy casemates the pride of rebels—and also the courage of

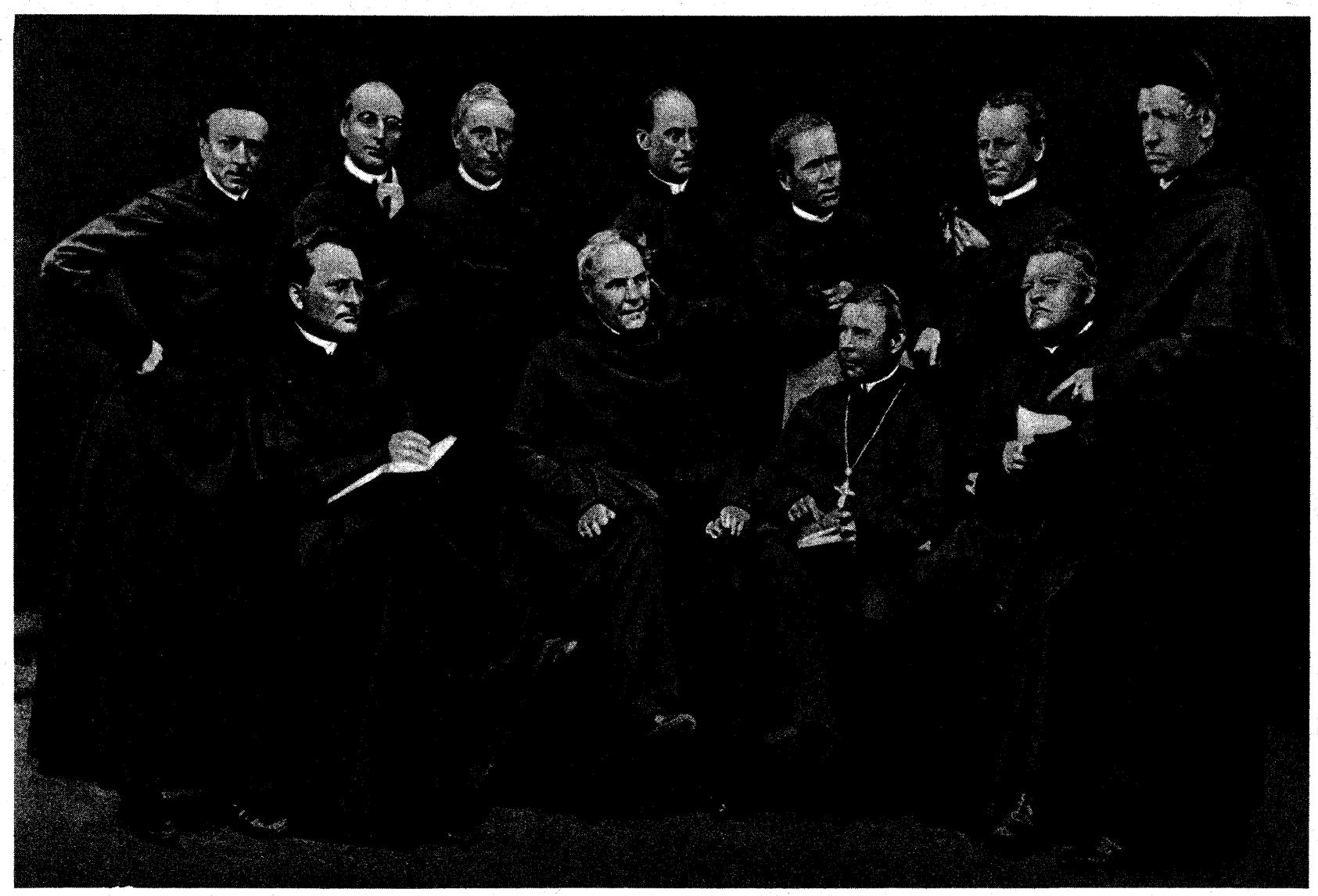
free spirits—used to be broken. Southward stretches the wide and fertile Moravian plain, limited on the skyline by the blue silhouette of the Pollau hills crowned with ruined castles. Below us, at the foot of the garden, is the monastery cellar, and above it a simple wineshop where the burghers of Altbrünn often sit over their glasses on a summer afternoon.

When Mendel became an Augustinian hard upon ninety years ago, the place pulsed with artistic and scientific energy, so that it would have been no exaggeration to describe the monastery of St. Thomas as one of the chief centres of the spiritual and intellectual life of the country. The prelate of those days was Cyrill Franz Napp, a notable man both as to appearance and character. Born in 1782, he had while still quite young done good work as an orientalist, publishing important articles in various periodicals, and occupying the post of professor of the Old Testament and of oriental languages at Brünn Theological College. In 1824, when only forty-two, he was elected prelate of the Augustinian monastery. It was usual to choose a fairly young member of the order to fill the office; for whenever a prelate died, a high tax upon the monasterial property became payable, and the brethren naturally wished to discharge this liability as seldom as possible. When Napp took over the post, the monastery was very low in funds, partly owing to a run of ill-luck and partly because of building expenses. Being a good man of business, Napp was able, not only to improve the financial position of the monastery, but also to bring the restoration of the church and the additions to the monastery buildings to a successful conclusion. His energy and purposiveness soon attracted the attention of the government, which overwhelmed him with distinctions and dignities. As representative of the estates of Moravia, he became a member of the standing committee of the diet (the supreme territorial authority), and as such he was appointed deputy lord-lieutenant. He was also made director of high-school education in Moravia. The great influence given to the prelate by these outstanding positions was reinforced by the breadth

of his ideas and by the far-sighted vigour with which he endeavoured to realise them. He had a good deal to do with the inauguration of Brünn Technical School.

Although at first sight he appeared small and insignificant, and although he limped as the result of a fall, he gave the impression of being a thorough man of the world and grand seigneur, and one who never forgot his sense of dignity. Indeed, some charged him with arrogance, and maliciously declared that he insisted on his own mother's addressing him as "Your Grace." He made the other inmates of the monastery keep their distance, only holding converse with the conventuals through the instrumentality of the prior and with the novices through that of the master. He insisted upon marks of respect from all his subordinates. Nonetheless, he was zealous in promoting the interests of the brethren of the order, being quick to recognise talent among them and when possible to further its development.

Thus Prelate Napp had not failed to notice the exceptional gifts of Franz Theodor Bratranek who, born in 1815 at Jedownitz in Moravia, had been invested as a novice in the year 1834. Through Napp's recommendation the young man during his student years in Vienna gained access to the house of Baroness Ottilie von Goethe, soon winning the favour of the great poet's daughter-in-law and that of her sons. This opened for the young investigator the doors of the Goethe archives in Weimar, then accessible only to a select few, and gave him a splendid opportunity for carrying on his researches. Later, after taking his doctor's degree in Vienna, he returned to Brünn and was for a time Napp's secretary. Next he worked for two years at Lemberg University as assistant to the philosopher Hanusch. Shortly before Mendel's novitiate began, he was back in Brünn once more, and remained there till 1851, becoming professor in the Philosophical Institute which had been founded at Brünn in 1808. Appointments to the staff of this institution were made by the monasteries of Altbrünn, Raigern, and Neureisch. Among the professors



P. Anselm Rambousek P. Antonin Alt P. Thomas Bratranek P. Josef Lindenthal P. Gregor Mendel
P. Benedikt Fogler P. Paul Křižkovsky P. Baptist Vorthey P. Cyrill Napp P. Alipius Winkelmeyer P. Wenzel Šembera

Plate III. Gregor Johann Mendel among his Fellow-Monks

were, besides Bratranek: Süsser (from the Altbrünn monastery) and his successor Klacel, in the chair of philosophy; Thaler, in the chair of mathematics; Wolny, the historian, from Raigern; and Franz, the physicist from Neureisch, who later (as previously narrated) went to Olmütz, and there became Mendel's teacher. When, subsequently, the Philosophical Institute was amalgamated with Brünn High School, Bratranek continued to do valuable work at the latter, coming into touch there with the ablest minds of Brünn.

Almost all the inmates of the monastery at that date were engaged in independent activities either scientific or artistic. Prelate Napp, a man of large views, was delighted that the institution under his care should become an intellectual centre, and was unstinting in his hospitality. Men of mark were frequent guests. To mention one only, Walther von Goethe came to stay with his friend Bratranek, Altbrünn being their starting-point for excursions into the beautiful mountain region known as the "Moravian Switzerland."

In 1851, after the publication of his *Handbuch deutscher Literaturgeschichte*, Bratranek had a call to Cracow University, where he worked for thirty years thereafter, beloved and admired by students and colleagues. Primarily he was a philosopher, but most of his books deal with the borderland between philosophy and natural science. Thus from Goethe's literary remains he selected and edited the scientific correspondence with Count Sternberg and the Humboldt brothers. In 1852 Brockhaus published his *Aesthetik der Pflanzenwelt*, humorously named by Walther von Goethe "the green Aesthetics," the fruit of mature and earnest thought. During the eight years in which Mendel was closely associated with Bratranek, the young man must have breathed a Goethean atmosphere, and the poet's words "neither time nor any other power can disintegrate a once-minted form that is undergoing a living development" may well have exercised an influence upon his thought.

Before Mendel came to Altbrünn, a distinguished botanist

had already been one of Bratranek's fellow-monks. This was Pater Aurelius Thaler, born at Iglau, and as a botanical writer known under the pen-name of Aurel. He might have been a formidable rival to Napp for the election as prelate, but stood aside in the jovial and good-natured way characteristic of him. An anecdote from the time that followed Napp's election illustrates the contrast between the two men. Prelate Napp had been informed that Thaler, who loved to look upon the wine when it was red, often stayed out till after midnight and when he did get back was apt to be rather unsteady on his pins. Determined to make this erring brother ashamed of himself, Napp, decked out with all the insignia of office, waited for him one night in the porter's lodge. When, at a late hour, the botanist at length rang for admission he was, to say the least of it, merry. Flabbergasted for a moment at the sight of his chief, he soon pulled himself together. Making a deep reverence, he said roguishly "Lord, I am not worthy to come under thy roof," turned on his heel—and went back to his potations.

As an investigator, Thaler, who like Bratranek was professor at Brünn Philosophical Institute, ranks high. In a huge herbarium at the monastery he had made a complete collection of the Moravian flora. Accompanied by his friends Rohrer and Tkany he made numberless botanical expeditions throughout the country, and it is to him that we owe our knowledge of the habitat of certain rare plants. In the monastery pleasance, from 1830 onwards, Thaler had with Rohrer's assistance tended a small botanical garden, in which they cultivated some of the more exceptional local species. For several years in succession, in the "Mitteilungen der mährischen Ackerbaugesellschaft" (Reports of the Moravian Agricultural Society), they published weekly a list of the flowers that were blooming in this garden, hoping thus to encourage a taste for botany in the young.[1]

[1] Christian D'Elvert, Schriften der hist. stat. Sektion der k. k. Ges. zur Beförd. d. Ackerbaus, Brünn, 1868, vol. xviii, p. 188.

Thaler died in June 1843, when only 47 years of age, shortly before Mendel came to Altbrünn; but the herbarium and the botanical garden were still in being, and were both attractive to the novice, helping to revive his fondness for horticulture. The autobiography tells us how he came to devote himself to natural history. "By this step [his becoming an Augustinian] his material position had been completely transformed. Now that he had been relieved of that anxiety about the physical basis of existence which is so detrimental to study, the respectful undersigned acquired fresh courage and energy, so that it was with pleasure and love that he undertook the course of classical studies prescribed for the year of probation. In his free time he occupied himself with the small botanical and mineralogical collection available at the monastery. His fondness for natural science grew with every fresh opportunity for making himself acquainted with it. Although he had no oral guidance in this undertaking (and perhaps there is no other department of knowledge in which the self-taught student has such difficulties to face and moves so slowly towards his goal), he has ever since been so much addicted to the study of nature that he would shrink from no exertions which might help him, by further diligence on his own part and by the advice of men who have had practical experience, to fill the gaps in his information."

Alone, or in converse with the sage and tranquil fathers, he roamed through the monastery garden. Pater Bratranek, carefully dressed and very much the man of the world, who had in former days when beginning the study of botany profited by the advice of Pater Thaler, was pleased by the interest in this chosen science now manifested by the doubtless somewhat gawky newcomer, and did all he could to give the youngster a helping hand. There was also a good-natured Bavarian, Pater Alipius Winkelmayer, with a taste for botany. He had come to Altbrünn soon after Mendel, and in later years was a helpful assistant in the experimental work.

There were other fields of intellectual and artistic endeavour

in which the conventuals of Altbrünn then played a part. One of the most interesting figures was that of Pater Franz Matthaeus Klacel. He had come to the monastery in 1827 when nineteen years of age. For a time, like Bratranek and Thaler, he taught at the Philosophical Institute, then under episcopal control. In 1844 he was deprived of his professorship by the bishop "for spreading the Hegelian philosophy and Hegelian ideas." A liberal-minded and straightforward man, he devoted his enforced leisure to literary and botanical studies. Gregor Mendel, as novice, was naturally in close touch with Bratranek and Klacel, who, though not professional botanists, were distinguished amateurs of that branch of science. Subsequently Klacel, while continuing the study of philosophy, became interested in cosmogony and astronomy. For a time he was in request as private tutor to the daughters of the "best families" of Brünn. Later he turned his attention to politics, took an active part in the Czech nationalist movement, and was for a time editor of the "Moravské Noviny" (Moravian News). His liberal outlook in political and philosophical matters made monasterial life increasingly irksome. At length in 1868 the liberal minister Giskra gave him a passport, and he emigrated to America just before Mendel's election as prelate. In the New World he wandered from place to place seeking recruits for the support of his utopian though well-intentioned ideas. One of his schemes was to found a community of primitive Christians, for he had developed a strong animus against ecclesiastical and especially against orthodox Roman Catholic tenets. An ardent spirit, an unlucky reincarnation of John Hus, wearied by his wanderings, he died in 1882 after a long life full of adventures and disappointments, in the little town of Belle Plaine.

A striking contrast to the tumultuous destiny of Klacel was the tranquil existence of his friend and fellow-Augustinian Paul Křižkovsky, the musician and composer. He was two years older than Mendel, genial and sanguine, sprung from a Brünn family in which musical talent was hereditary. Like

Mendel, he became a monk for economic reasons rather than because of any strong vocation, and in the hope of finding a secure ground on which to cultivate his beloved music. His chief successes were in the field of church music. Having remodelled the Gregorian chant, he was instrumental in promoting the revival of plain-song. As choirmaster, and as director of the Thurn musical academy connected with the monastery of St. Thomas, he was able, with the assistance of Brünn amateurs, to see to it that the best church-music of the capital should be performed at Brünn. He was especially interested in sixteenth-century composers. In addition, however, he was a collector of Czech folk-songs, being (as his name indicates) of Czech descent, and, like his friend Klacel, an enthusiastic supporter of the Czech nationalist movement. He became a novice at about the same time as Mendel. Later he was appointed choirmaster at Olmütz Cathedral, and thenceforward was seldom at the monastery. He died in 1886.

Among the other conventuals there were several men of conspicuous ability, though perhaps none who could vie with the Bratranek–Klacel–Křižkovsky triumvirate. Mendel's fellow-novices were Chrysostomus Ciganek and Anselm Rambousek. The former died young, in 1861. The latter was always a little antagonistic to Mendel, and was elected prelate in succession to him. Pater Benedikt Fogler, who helped Mendel in his preliminary classical studies, was a good linguist, and became professor of German, French, and Italian at Brünn Modern School. He was respected for his abilities as a teacher, but was not liked by his pupils, his harshness contrasting very sharply with the kindliness of Mendel, who in due course became his colleague at the school. Fogler was, like Bratranek, a man of the world; and just as Bratranek had set up house with his sister, so too Fogler found it more congenial, after a time, to cut loose from monastic life. Several other members of the community secured posts as teachers at schools or as headmasters of these institutions, the prelate having the last word in many such appointments. Another of the Brünn

Augustinians, Antonin Alt, became headmaster of Troppau High School, in succession to Pater Ferdinand Schaumann who (as already said) was in charge there during Mendel's school days. Subsequently Pater Alt returned to the monastery of St. Thomas as prior.

Pater Josef Lindenthal, one of the few of the conventuals who had been born at Altbrünn, was, like Pater Alipius Winkelmayer, one of Mendel's assistants in experimental work. Among the other monks it is expedient to mention Pater Baptist Vorthey, prior and monasterial incumbent of Altbrünn, a tall, quiet, and serious-minded man; Pater Augustin Kratky, an able theologian; and Patres Šembera, Poye, and Ernest Schwetz.

The group shown in Plate III, photographed somewhere between 1861 and 1864, shows Mendel during the days of his famous experiments. He is seen holding in his left hand the Mendel fuchsia (see the enlargement in Plate V, the "Fuchsia Portrait"). It may well be that this particular flower belonged to one of the varieties whose artificial fertilisation was, as he tells us, the prelude and the incitement to his experiments. His right hand rests on the back of the prelate's chair, and we are reminded that Pater Napp was most friendly to him in a paternal way. We note an inclination to corpulence; also the tuft of whisker, which must have been tolerated by his superior. We learn from Mendel's nephews that this was an excellent likeness.

Although when Mendel was at the monastery some of the conventuals, Klacel and Křižkovsky for instance, were Czechs, the Germans predominated, and German was the usual medium of conversation. As had often happened in the Middle Ages, though it has been rare in modern times, the monastery was a cultural focus, not only for the town, but for the whole region. Mendel, therefore, when he had been novice for a year, stood at the parting of the ways. He had to choose between the companionship of men of light and learning, and the contemplative repose of a life spent in the monastery garden.