THE OBSERVATORY,

A MONTHLY REVIEW OF ASTRONOMY.

No. 66. OCTOBER 2. 1882.

Dr. Demainbray and the King's Observatory at Kew.

Dr. Demainbray, whose Christian names were Stephen Charles Triboudet, was born in London of French parents in the year 1710. His father had fled from France to Holland upon the revocation of the "Edict of Nantes," and came over to England with King William. He died soon after the birth of his only son, who was brought up by his uncle, Captain Demainbray (an officer in the English service, and Page of Honour to Queen Mary), who placed him at Westminster School; and, whilst pursuing his studies there, he boarded in the house of Dr. Desaguliers, who instructed him in mathematics and natural philosophy.

At the age of seventeen, before he had left school, he imprudently married. Quitting school he went to Leyden, and followed his studies in the university at that place, and supported himself by teaching others.

By this marriage he had one son, who died young, and one daughter, who married a Mr. Rigaud, who lived all the latter years of his life at Richmond.

In the year 1740 he went to Edinburgh, and began to read lectures in experimental philosophy, and with great success in the undertaking; for by his unwearied application and perseverance his literary acquirements were so increased as to fit him for a more enlarged sphere of life, whilst at the same time he made a sufficient income to enable him to procure for himself the largest and most curious collection of mathematical and philosophical instruments then in private hands, either at home or abroad, and fully, as he reckoned, doubled the knowledge he had obtained under his predecessor and old master Dr. Desaguliers.

At Edinburgh Dr. Demainbray took his degree of Doctor in Canon and Civil Law, and remained there till 1745, when he was interrupted by the Jacobite rebellion, and, taking up arms for the Government as a volunteer, was present at the battle of Preston-Pans.

In the year following (1746) he resumed his lectures and published his discovery of the effects of electricity upon the growth of vegetables. This discovery was afterwards claimed by Abbé Nollet, but is very properly assigned to Dr. Demainbray by Priestly in his history of Electricity.

The Doctor kept up a correspondence with his late master Dumoivre, who recommended him to men of letters in England. Dumoivre represented him as the only pupil he had made worthy of being his representative, and from the discoveries he had made and published he made many friends, even amongst those who were personally unknown to him.

About the year 1748, Dr. Demainbray, finding the stage of Edinburgh "too confined for him," as he expressed it, accepted an invitation to go over to Trinity College, Dublin. There he continued for a year and a half, reading courses of lectures on natural and experimental philosophy with his usual good fortune of public approbation and profit.

At the end of that period very advantageous terms were offered to him from France. The overtures made by Barbot and Montesquieu, the President and ex-President of the Royal Society at Bordeaux (including the giving him every convenience in the Royal Academy itself), were not to be resisted, and he left Dublin at a time when he might have made what demands on the public he pleased.

His boy had died in Scotland before he left that place, and his family consisted of his wife and his then only daughter, Mary, afterwards married to Mr. Rigaud, father of a former Savilian Professor of Astronomy and Radcliffe Observer at Oxford.

In France (though not of the religion of the country) he was received as an "Associé Ordinaire" and member of the Royal Academy; the only instance of a declared protestant not being placed on the list termed "la Liste Etrangère."

At Bordeaux the family of the Doctor's late mother resided, of whose station in life he was rather proud.

From Bordeaux he was made a member of the Academy of Toulouse, and was from thence called to Montpelier, where he had the same advantages and success, and procured for himself the right of a seat in the Academy of Science in Paris.

But at Montpelier, in the year 1750, he lost his wife ("that worthy and excellent sharer of my fate," as he described her in one of his letters), after an illness of six weeks; and the shock affected him so much as to put a stop to any thoughts of foreign excursions in the future; for though he received extraordinary offers from the then Prime Minister of Spain, the Marquis Ensenada, who invited him to the Academy of Madrid, he rejected them.

He was also in part led to this determination by proposals which were made to him by Earl Brooke, who was then at Montpelier, and had been recommended to do so by Lord Albemarle and M.

Dumoivre. These proposals were that he should return to England and become teacher to the Heir Apparent to the Throne in mathematics, philosophy, and natural history.

Leaving Montpelier with Earl Brooke and their two families, they proceeded to Lyons, where, by invitation of the Royal Academy of Science of that city, he read a course of Lectures, and was received as a member of it on his own terms; and after a stay of three months Lord Brooke and he with their families went on to Paris.

After a short stay there he returned to England, where he arrived on 17th October, 1754, and was soon after admitted to his duties in the education of his Royal Highness the Prince of Wales and the Duke of York. The salary he received was £300 a year, which was probably considered liberal at that time, and he was not precluded from exercising his talents elsewhere. In the year 1755, he read a public course of Lectures in the concert-room in Panton Street, London; and after that he gave private courses of lectures to other members of the Royal Family; and when Queen Charlotte came to England he instructed her also in experimental philosophy and natural history.

On the 1st of February, 1755, Dr. Demainbray married a second time, his wife being a daughter of Mr. Horne, poulterer to His Majesty and the Royal Family, a man much esteemed, and who had acquired a good fortune; his daughter had received her education in France, and no outlay had been spared upon it, so that her accomplishments were such as seldom were met with in a tradesman's daughter. At the time of their marriage he was 45 and she was 21 years of age; and the Doctor, in a letter some years afterwards, describes his family as:—"Polly (by the first bed)" [this was Mary, Mrs. Rigaud]; "and Louisa (the eldest by the second bed), then turned of 10 years old; Elizabeth 9 years; Stephen a boy turned of 7, the speaking image of his great-uncle, Captain Demainbray, of a thinking serious cast, took to his learning astonishingly, and the foolish old father," as he calls himself, "thought he saw something genteel and distinguished about him; the youngest Sally, of about 4 years old, a brown girl like her father."

When His Majesty George III. came to the age of eighteen, and governors and teachers were dismissed, Dr. Demainbray was pleased to have the sole trust of teaching him sciences till he came to the throne; Queen Charlotte, after her marriage with the King, also became his pupil and listened to his lectures in philosophy, and to her he gave his manuscripts, which were afterwards sold with her library.

The Queen was pleased to present a valuable watch to the Doctor in 1769, with the following inscription on it:—"The gift of Her Majesty Queen Charlotte to Stephen Charles Triboudet Demainbray, LL.D., 1769;" and this watch is still in the hands of his grandson, and it still keeps remarkably good time, though 111 years old.

When Dr. Demainbray's salary of £300 a year ceased, he was recommended for employment in the Revenue; and, on appointment by the Ministry of the day, undertook the duties of three offices in the Custom House, London. In two of these offices the whole of the Crown Revenue arising from the East-India Company, and amounting to about one million a year, was under his care as principal of that department. His third office was that of one of the four examiners of the accounts of the receipts of monies of all the seaports of England, except London, which was supervised by His Grace of Manchester. The emoluments of these offices were sufficiently good for the Doctor to remark in one of his letters that under his present position he would be enabled (if he lived) to educate his family, and leave them, not destitute, as he once was, provided he then lived some few years.

In the year 1769 the Transit of Venus was anticipated to be seen in England, and His Majesty King George III. took so much interest in the matter that in 1768 he commenced building an Observatory at Kew, and appointed Dr. Demainbray the Astronomer of it, who, when it was finished, adjusted the instruments there in time to observe the Transit of Venus, which happened in the year 1769.

His Majesty frequently attended at the observatory and procured the best clocks and watches that could be made and placed them in the Observatory, under the Doctor's care, so that by daily observations of the Sun when passing the meridian, the time was regulated to a second; and for many years the accurate time was taken from the King's Observatory at Kew, for the regulation of the clocks in both Houses of Parliament, at the House Guards, St. James', and elsewhere, before the accommodation was so well and publicly afforded, as it is in the present day, from the Observatory at Greenwich.

In the year 1782 Dr. Demainbray died, and was buried in the churchyard of the parish of Northolt, Middlesex, about $2\frac{1}{2}$ miles from Harrow on the Hill, where he had purchased a small estate of Dr. Parr, the well-known Master of Harrow School.

On his tomb is the following inscription:—"Stephen Charles Triboudet Demainbray, LL.D., who departed this life February 20th, 1782, on which day he entered into his seventy-third year."

His Majesty King George III., with the assistance of Dr. Demainbray and his son the Rev. Stephen George Francis Triboudet Demainbray (who held and superintended the Observatory as the Astronomer for upwards of 58 years after his father Dr. Demainbray's death in 1782), procured a large collection of instruments, models, &c. &c., besides a large apparatus for experiments in mechanics, pneumatics, hydrostatics, optics, magnetism, electricity, &c., and also a very valuable natural-history collection in excellent preservation. In addition to these there was a beautiful collection of silver-ore and minerals from the Hartz mines; but these were afterwards given by His Majesty George IV. to the British Museum.

The observatory was for many years an object of great interest to King George III.; and the Rev. S. Demainbray was for a length of time the teacher of the younger members of the King's family, who attended at the Observatory for his lectures on astronomy, electricity, &c.

Mr. Demainbray, during the latter part of the 58 years in which he superintended the Observatory as astronomer, was assisted by his nephew, Stephen Peter Rigaud, Esquire, who was Savilian Professor of Astronomy at Oxford and Radcliffe Observer. He took charge of the Kew Observatory during the Oxford vacations, and thus enabled the Rev. S. Demainbray to reside during those periods on his living in Wiltshire.

George IV. and William IV. both maintained an interest in Kew and the Observatory; but for Her present Majesty there were none of the early associations connected with the spot which linked to it the children of George III.; and in 1840 the instruments and other treasures in the Observatory were given (under the order of the then Lord Chamberlain) to King's College, London, and other institutions.

When this took place the Rev. S. Demainbray retired from the charge on a pension for life, which ceased of course at his death, in July 1854, at the advanced age of 95 years.

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The above sketch is copied (with a few very slight alterations) from a paper kindly lent by the only surviving grandson of Dr. Demainbray, and who is now 84 years of age. I think it would not be without interest to those who observe a special line of genius descending and developing in families to show how far back the *scientific* turn of mind can be traced in the families of Demainbray and Rigaud.

It has been said above that Dr. Demainbray when he went to Bordeaux was pleased "with the position of his mother's family." The explanation of that is as follows:—Baron de Montesquieu (the author of 'L'Esprit des Lois' &c.), who was born at the Castle of Brede, near Bordeaux, in 1689, and who in 1716 was President of the Bordeaux Parliament, was still living at the time of their stay there, and in him Mrs. Demainbray found a near connection.

La Brue, the famous mathematician and engineer, who fortified Blayne near Bordeaux for Henry IV. of France, left three daughters, one of whom married a Rigaud (grandfather of Etienne, who married Mary Demainbray), and another married a De Skyrac, one of those who fled, and escaped with great difficulty, from France after the revocation of the Edict of Nantes in 1685.

Montesquieu and the De Skyracs were related.

The original name of the family of Demainbray appears to have been 'Triboudet,' 'de Mombray'* being a sort of local affix. M.

* There was one 'de Mombray' naturalized under that name in the eighth year of William III.

Triboudet married a grand-daughter of the Minister John Baptist Colbert, Marquis of Geguelai, the great financier of Louis Quatorze, the great encourager of literature and the arts, who instituted the Academy of Sciences, and at whose recommendation was built *the Royal Observatory*.

This M. Triboudet had a son, Stephen, who married a De Skyrac; and the only son of that marriage was Dr. Stephen Demainbray (that name appearing for the first time), whose life has just been sketched, and who in his generation suggested to the King of England the *Observatory at Kew*.

From the marriage of M. Rigaud with the daughter of La Brue two sons were born, Pierre and Etienne, the latter a physician, who died a bachelor. Pierre married Anne Unice Mestre, to whom was born a large family; and his son Etienne married Mary Demainbray, who had only one daughter, Mary Anne (died unmarried), and one son, who was named Stephen Peter, after his father and his only uncle respectively.

It will be seen therefore that there was a close connection between the families of Demainbray, Rigaud, and De Skyrac, having a common origin in those of Colbert and La Brue, and an inherited leaning to scientific studies, which they communicated to one another.

Of the birthplace of Stephen Peter Rigaud I know nothing, but believe it to have been either in the department of the Gironde or, more probably, rather further south in the Basses Pyrenees, somewhere about Pau.

It is certain, however, that he also was an astronomer and was for many years associated with the Demainbrays, father and son, in the work at the King's Observatory.

Dr. Demainbray died in 1782, when his son was about 24 or 25 years old and was still a Fellow and Tutor of Exeter College, which position he held until 1799, when he was presented to the College living of Somerford Magna, Wilts. He was one of the Kew Observers, as colleague of Mr. Rigaud, from the time of his father's death; and when Mr. Rigaud died in 1814 Professor Stephen Peter Rigaud was appointed his father's successor and co-observer with his uncle. The uncle was 17 years older than the nephew, and both at home at Richmond and at Exeter College was his tutor in mathematics and his first instructor in astronomy.

There is an entry of Professor Rigaud's when he was about 20 years old, noting the day when the uncle taught him to adjust the instruments; and a few days after that he took his *first observation*, which was presumably a Transit of the Sun at meridian, as the chief object of the work at Kew was maintaining an accurate account of time and the rating of the clocks and watches.

The King's Observatory lived for 71 years, *i. e.* from 1769 to 1840. It, during that period, was in charge of the Demainbrays, father and son, and the Rigauds, father and son. The last is not yet entirely forgotten, and his memory is enshrined in the pages of

the Transactions of the Royal Astronomical Society; and this sketch of the first, by his grandson, Mr. Stephen Demainbray, it is hoped will also be welcome to those who take an interest in the history and progress of astronomy.

Should this be so, it will be a source of considerable gratification to his great-grandson,

GIBBES RIGAUD.

18 Long Wall, Oxford,
November 1881.

Comet-seeking.

THE following notes may possess some interest now that this branch of astronomy has been attracting more general notice than hitherto. We have evidence of this in the arrangement of concerted methods of sweeping, adopted by observers in America and elsewhere, which must eventually have the effect not only of increasing the number of cometary discoveries, but of awaking a wider interest in the whole subject. It is, however, a little remarkable that only one comet has been discovered by means of the telescope during the last 9 months, and this notwithstanding the greatly increased diligence with which they have been sought for by observers at home and abroad.

The English climate is admittedly bad for astronomical work, but it comes in for an amount of abuse which far exceeds the justice of the case. Every failure is attributed to bad weather; and the meagreness of results finds this a ready excuse when often the observer himself is at fault. A man who constantly awaits his opportunity early and late, and has made provision for the exigences of a possibly hurried observation, will seldom have cause for complaint. Disappointments there will be, it is true, especially as regards occasional phenomena; but in regular systematic work he will find plenty of suitable weather to utilize for his special ends. The climate in which Herschel was enabled to make such a vast number of important observations is not nearly so deplorable as it is the custom to describe it, though that great observer himself admitted his belief that there were not more than 100 hours per annum, when really first-class definition could be obtained. But this has little significance in reference to the work of comet-seeking, because definition, either of the atmosphere or telescope, is not of much moment; all that is really essential is a clear sky; the darker and purer the air, the better it is for the purpose.

Opinions are divided as to the most suitable aperture and power for this work. Very large instruments are not often used, because of their necessarily restricted fields. Moreover, a small instrument, apart from its advantage in this respect, is worked with greater facility and expedition. This is important, especially when the observer is to examine the region in the immediate