



CHARLES DARWIN AND DOWN HOUSE

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND
LINCOLN'S INN FIELDS, LONDON, W.C. 2

Down House is open to the public daily from
11 A.M. to 5 P.M. except Fridays and Christmas Day.

ADMITTANCE 1/- (CHILDREN 6d.)

Price 2/6

*The proceeds will be devoted towards the
upkeep of the house*

ROYAL COLLEGE OF SURGEONS OF ENGLAND

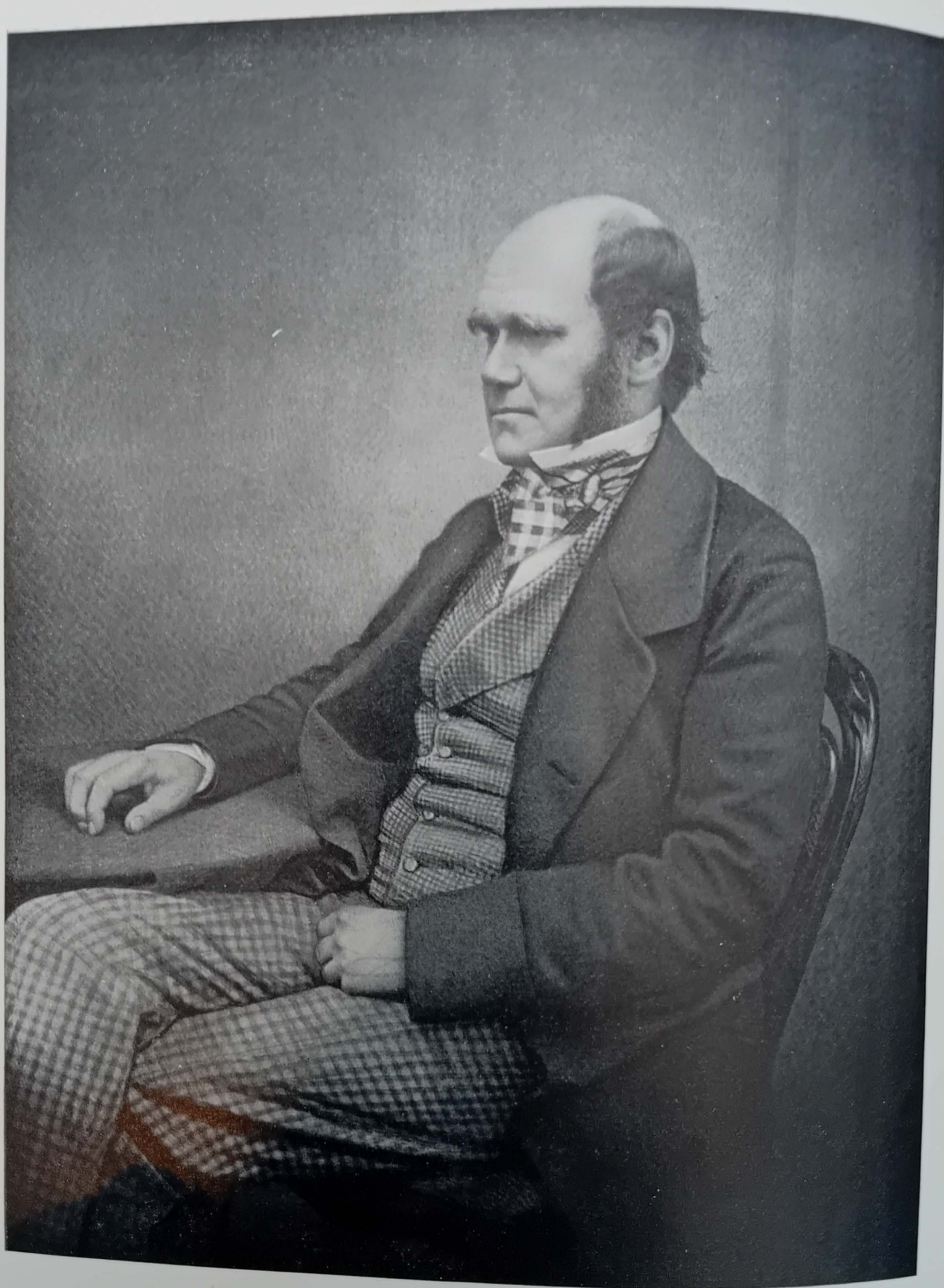
CHARLES DARWIN AND DOWN HOUSE

Prepared by JESSIE DOBSON, Curator of The Anatomy
Museum, Royal College of Surgeons of England.



E. & S. LIVINGSTONE LTD.
EDINBURGH AND LONDON

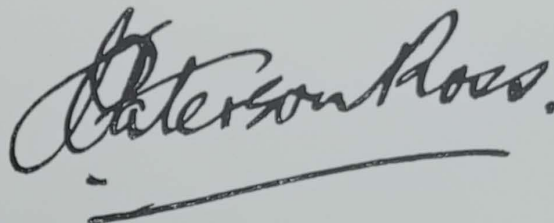
1959



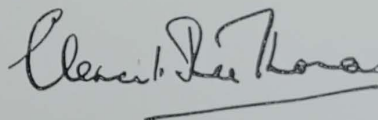
Charles Darwin at the age of 51.

FOREWORD

IN this year which commemorates the centenary of the appearance of Darwin's "The Origin of Species," the Down House Committee of the Royal College of Surgeons of England has felt that the publication of a brochure describing Darwin's work at Downe and the history of the house itself would be of more than usual interest. It is hoped that those who read this brochure will be encouraged to visit Down House and recapture there some of the spirit of scientific enquiry with which the name of the village is associated; for, quite apart from Darwin's work in and around Downe, the College itself has maintained research laboratories adjoining the Down House Estate since 1937. In undertaking the task of preserving this house, the Council of the College feel that they are not only paying tribute to the achievements of a great English scientist but in so doing are linking the past with more recent advances in research.

A handwritten signature in cursive script, reading "Peterson Ross.", with a horizontal line underneath.

President of the Royal College of Surgeons.

A handwritten signature in cursive script, reading "Clement D. Jones.", with a horizontal line underneath.

Chairman of the Down House Committee.

June 1959



The Spanish note. - which have the right of property
 I - fractured. have been melted with white
 perfume. & perhaps cooled indurating. -
 as the rule of gravity of the globe show
 power have acted from great depths,
 so changes, acting in these lines, must now
 proceed from great depths.
 important. -

Dec 10. 1802. Earthquake at Denmarca. The
 earthquake seem to arise from some efforts
 in the land to lift itself higher & to
 grow upwards; for the land is constantly pushing
 the sea (which of course must retain sea level
 to a greater distance). - Afterward speaks of
 this phenomenon in connection with shooting of
 the present land in the U. S. A. lies.
 p. 200. Bolling broke voyage to the Denmarc

Notebooks kept by Darwin during the voyage of the *Beagle* from which the diary was prepared.

CHARLES DARWIN

CHARLES ROBERT DARWIN, whose name as a naturalist is among the most famous in the history of science and of human thought, was born at Shrewsbury on 12th February 1809 and died at Down House on 19th April 1882.

His early education was gained at a day school in Shrewsbury, but at the age of nine he was sent to Dr Butler's Boarding School only a mile or so from his home. At this period of his life he was not only interested in collecting insects but, with his brother Erasmus, carried out experiments in a chemical laboratory set up in a toolshed in the garden, thereby earning a reprimand from their headmaster for wasting time in such useless pursuits. In 1825 he joined his brother in Edinburgh to begin the study of medicine. Charles especially seems to have disliked his studies and he particularly mentions Dr Monro (Alexander Monro tertius), who "made his lectures on human anatomy as dull as he was himself." He always regretted, however, that he had not persevered to overcome his dislike of dissecting, for this aversion and his lack of skill in drawing was, he remarked many years afterwards, "an irremediable evil."

It was in Edinburgh that he made the acquaintance of Robert Edmond Grant, later to be Lecturer in Zoology at University College, London. "I knew him well," says Darwin, "he was dry and formal in manner, with much enthusiasm beneath his outer crust. He, one day when we were walking together, burst forth in high admiration of Lamarck and his views on evolution. I listened in silent astonishment, and as far as I can judge, without any effect on my mind. I had previously read the *Zoonomia* of my grandfather, in which similar views are maintained, but without producing any effect on me. Nevertheless, it is probable that the hearing rather early in life such views maintained and praised may have favoured my upholding them under a different form in my 'Origin of Species.'"

After two years in Edinburgh, Darwin went to Christ's College, Cambridge, where he spent three sessions. It being apparent that he had no taste for medicine, his father proposed that he should become a clergyman; but, says Darwin, "during the three years which I spent at Cambridge my time was wasted, as far as the academical studies were concerned, as completely as at Edinburgh and at school." He did, however, gain his B.A. and benefited much by the friends he made, these including the Professor of Botany, J. S. Henslow, the Rev. Adam Sedgwick, the geologist, and J. M. Herbert, later County Court Judge for South Wales. Nor did he neglect his earlier

interests, particularly the collection of beetles. "It was the mere passion for collecting," he says, "for I did not dissect them and rarely compared their external characters with published description, but got then named anyhow. . . . I was very successful in collecting and invented two new methods; I employed a labourer to scrape, during the winter, moss off old trees and place it in a large bag and likewise to collect the rubbish at the bottom of the barges in which reeds are brought from the fens, and thus I got some very rare species."

Shortly after leaving Cambridge at the end of the May term in 1831, Darwin received a letter from Professor Henslow to say that Captain Fitzroy was willing to give up part of his own cabin to any young man who would volunteer to go with him without pay as a naturalist on his forthcoming voyage. Robert Fitzroy, son of Lord Charles Fitzroy and grandson of the third Duke of Grafton, had been promoted to the command of the *Beagle* brig in 1828 and assisted in the survey of the coasts of Patagonia, Tierra del Fuego and the Straits of Magellan. In 1830 he was again appointed to the *Beagle* to continue the survey. Darwin was eager to accept this offer but his father strongly objected to the project saying, however, that if he could find any man of common sense who advised it he would give his consent. The "man of common sense" proved to be his uncle, Josiah Wedgwood, and so it was all arranged. Darwin himself regarded this venture as the most important event in his life and one that determined his whole career. The voyage took almost five years, and even before his return to England he had taken his place among the notable scientific men of the time, for the specimens he had sent home had aroused considerable attention and some of the letters he had sent to Professor Henslow had been printed for distribution among members of the Cambridge Philosophical Society.

During the two years after his return to England he finished the "Journal of the Voyage," read several papers before the Geological Society, began preparing his "Geological Observations" and arranged for the publication of the "Zoology of the Voyage of the *Beagle*." In addition he began to collect the data which, twenty years later, resulted in the publication of his theories on "The Origin of Species."

On 29th January 1839 Charles Darwin married his first cousin, Emma Wedgwood, and for more than three years they continued to live in London at No. 12 Upper Gower Street. He went into society more at this period of his life than at any time later. One of his new friends was Charles Lyell, whose "Principles of Geology" had been of such good service to him during the voyage when he became convinced of the infinite superiority of Lyell's views over those advocated in any other works on the subject. He became



Emma Darwin, aged 31
From the portrait painted by George Richmond, R.A.

Emma Darwin, aged 31
(From the portrait painted by George Richmond, R.A.)

acquainted with Friedrich Heinrich von Humboldt, the scientist and traveller, Lord Macaulay, Lord Stanhope and George Grote, the historians, Sydney Smith and Thomas Carlyle, the essayists, and attended the meetings of several scientific societies as well as acting as secretary to the Geological Society.

It was on 14th September 1842 that Mr and Mrs Darwin and their two children, William and Anne Elizabeth, moved into Down House. For some years afterwards he made regular visits to London to attend meetings and meet his friends, but the remoteness of the village in those days—the nearest stations then were Croydon or Sydenham—and his increasing ill health after a time made these excursions more and more rare. There is no doubt that the seclusion that he found at Down House and the freedom from financial worries, which was ensured at first by the generosity of his father, enabled him to work out at leisure the theories that made him famous.

But it was almost a matter of chance that these theories came to be published—or at least, just at that time. In September 1855 a young naturalist named Alfred Russel Wallace published a paper in the *Annals and Magazine of Natural History*, "On the Law which has regulated the Introduction of New Species," which indicated that he was working on lines similar to Darwin. Two years later Darwin received from Wallace, who was then in the Celebes, a letter the contents of which proved that they had independently arrived at the same conclusions about the process of evolution. On 18th June 1858 Darwin wrote to Charles Lyell enclosing a paper from Wallace on which he comments: "If Wallace had my MS. sketch written out in 1842, he could not have made a better short abstract! Even his terms now stand as heads of my chapters." A week later, in a further letter to Lyell, he says: "I should be extremely glad now to publish a sketch of my general views in about a dozen pages or so; but I cannot persuade myself that I can do so honourably. Wallace says nothing about publication, and I enclose his letter. But as I had not intended to publish any sketch, can I do so honourably, because Wallace has sent me an outline of his doctrine? I would far rather burn my whole book, than that he or any other man should think that I had behaved in a paltry spirit." Lyell and Joseph Hooker persuaded Darwin to make a brief report of his own theory and this together with Wallace's paper was read at a meeting of the Linnean Society on 1st July 1858, and both were published in the *Proceedings* in the following year ("On the Tendency of Species to form Varieties; and on the Perpetuation of Varieties and Species by Natural Means of Selection." *J. Proc. Linn. Soc.* 1859, 3, 45).

Darwin now decided that he must make known the main results of his twenty years' research on this subject, and so in November 1859 "The



The old study at Down House where Darwin wrote "The Origin of Species."

Origin of Species" was published. He pointed out that in all living organisms the offspring do not inherit all the variations of a preceding generation equally but there is a selection in favour of the more adaptive characteristics. Long continued selection of this sort eventually so changes the lineage that it represents a species different from its ancestry. Therefore, he says in his conclusions,

"Judging from the past, we may safely infer that not one living species will transmit its unaltered likeness to a distant futurity. And of the species now living very few will transmit progeny of any kind to a far distant futurity ; for the manner in which all organic beings are grouped, shows that the greater number of species in each genus, and all the species in many genera, have left no descendants, but have become utterly extinct. We can so far take a prophetic glance into futurity as to foretell that it will be the common and widely spread species, belonging to the larger and dominant groups within each class, which will ultimately prevail and procreate new and dominant species. As all the living forms of life are the lineal descendants of those which lived long before the Silurian epoch, we may feel certain that the ordinary succession by generation has never once been broken, and that no cataclysm has desolated the whole world. Hence we may look with some confidence to a secure future of equally inappreciable length. And as natural selection works solely by and for the good of each being, all corporeal and mental endowments will tend to progress towards perfection."

Whatever may be the future estimate of his theories, the interest and speculation, indignation and even ridicule that they aroused a hundred years ago and still, to a certain extent, evoke to-day can never be entirely forgotten ; the book will always remain one of the most influential publications of the century. The whole world of scientific thought was influenced by the results of the patient researches involved in its preparation, researches carried out in the quiet of a country house in the peaceful English countryside. Darwin had already completed his work on Coral Reefs (1842), on Volcanic Islands (1844) and on the Geology of South America (1846), and had published the results of his investigations on Barnacles which occupied the seven years from 1847 to 1854. In 1862 appeared his findings on the subject of "Fertilisation of Orchids," which was followed by "Variations of Animals and Plants under Domestication" (1868), "Descent of Man" (1871), "Expression of the Emotions" (1872), "Movements and Habits of Climbing Plants" and "Insectivorous Plants" (1875), "Cross and Self Fertilisation" (1876), and finally his work on the "Formation of Vegetable Mould through the Action of Worms," which he had begun as soon as he settled at Down House.

Charles Darwin's final years were full of happiness and prosperity. The sense of urgency of work to be accomplished gradually departed and he even took occasional holidays. He, his wife and their seven surviving children had always lived in an atmosphere of the greatest affection. A wise, true man, fame never altered the essential simplicity and nobility of his character and to his friends and family alike he was a delightful companion. To his wife and her constant care of him he owed more than can be told and the world's debt to her can scarcely be less than to him, for without that care his work could not have been accomplished.



Down House

DOWN HOUSE

THE earliest knowledge of the Down House property dates from 1681 when a Kentish yeoman family acquired most of the land and probably built a farmhouse there ; but the central block of the house as it now stands appears to date from the later part of the eighteenth century. In 1842, when the Darwin family moved there, it was said to be dull and unattractive—" a square brick building of three storeys, covered with shabby whitewash and hanging tiles. The garden had none of the shrubberies or walls that now give shelter ; it was overlooked from the lane, and was open, bleak and desolate." One of the first improvements made was to lower the level of the lane and build the flint wall. The house was made to look more attractive by the building of a bow extending up through the three storeys. The drawing-room and the new study were added in 1877.

After the death of Mrs Darwin in 1896 the property was let by the family to a Mr Whitehead and then to Miss Olive M. Willis, who used the premises for a girls' residential school. In 1922 Miss Willis moved her pupils to Newbury and the house was rented to Mrs Rain, who also conducted a school there.

In the year 1927 the British Association for the Advancement of Science held its Annual Meeting in Leeds and, during the proceedings, Sir Arthur Keith, the President, mentioned that Darwin's home was for sale and urged that steps should be taken for its preservation as a memorial to this great man. On reading this in the newspaper on the following morning, Sir George Buckston Browne, the distinguished London surgeon, at once sent a telegram to Mr O. J. R. Howarth, Secretary to the Association, to say that he would provide the funds necessary for the preservation of Down House as a national memorial. This offer was accepted and the house was opened to the public on 7th June 1929. With the generous co-operation of members of the family and of admirers of Darwin and his work both in this country and abroad, many of his books, pictures, personal possessions and letters, as well as furniture, were collected and displayed there.

Towards the end of 1952 the property was offered to and accepted by the Royal College of Surgeons. It was later found that the condition of the building was poor and that a considerable sum of money would be required to remedy the damage caused by dry rot and general dilapidation. As funds became available, the major and urgent work of restoring the fabric was undertaken and this was followed by redecoration and painting both inside and outside. In the early part of 1958, when most of the reparation had been completed, attention was turned to the arrangement of the main ground

floor rooms in particular as this year marked the centenary of the Darwin-Wallace communication to the Linnean Society and it was realised that the number of visitors to the house would be greatly increased.

The old study, where most of Darwin's work was done, is as nearly as possible as it was during his lifetime. In the drawing-room, the furniture includes the couch on which he rested and the piano on which Emma Darwin used to play to him. The new study is devoted exclusively to exhibits relating to Darwin and his work, including the notebooks he kept during the voyage of the *Beagle* and the MS. of the diary prepared from them; his telescope, case of pistols and barometer; personal belongings and private papers, as well as first and presentation editions of his works, copies of his letters, photographs and busts.

Outside the house, much of the garden remains as Darwin knew it. In the biography of Emma Darwin, written by her daughter, Mrs Litchfield, is the following passage :

“ Many gardens are more beautiful and varied but few could have a greater charm of repose and nowhere do I know one where it was so pleasant to sit out. The flower-beds were close under the drawing-room windows, and were filled with hardy herbaceous plants, intermixed with bedded-out plants and annuals. It was often untidy but had a particularly gay and varied effect. On the lawn were two yew-trees where the children had their swing, and behind a bay-tree there was a large heap of sand for them to dig in. Beyond the row of lime-trees was the orchard, and a long walk bordered with flowering shrubs led through the kitchen-garden to the “ Sand-Walk.” This consisted of a strip of wood planted by my father with varied trees, many being wild cherries and birches, and on one side bordered with hollies. At one end there was a little summer-house and an old pit, out of which the sand was dug which gave it its name. The walk on one side was always sheltered from sun and wind, the other sunny, with an outlook over the quiet valley on to the woods beyond, but also windy when it blew from the south or west, sheltered from north and east. Here we children played, and here my father took his daily paces for forty or more years. My mother loved this wood and took pains in later years to make it a sort of wild garden.”

The work of restoring the house and grounds to a condition fully representative of Charles Darwin's life, his achievements, family and environment, is by no means completed. To make this, his home for forty years, a fitting memorial, it is necessary to ensure that funds should always be available to plan and maintain the building and its contents at that high level of perfection and completeness necessary to demonstrate and perpetuate for all time Darwin's outstanding contribution to scientific knowledge.



The Drawing-room.

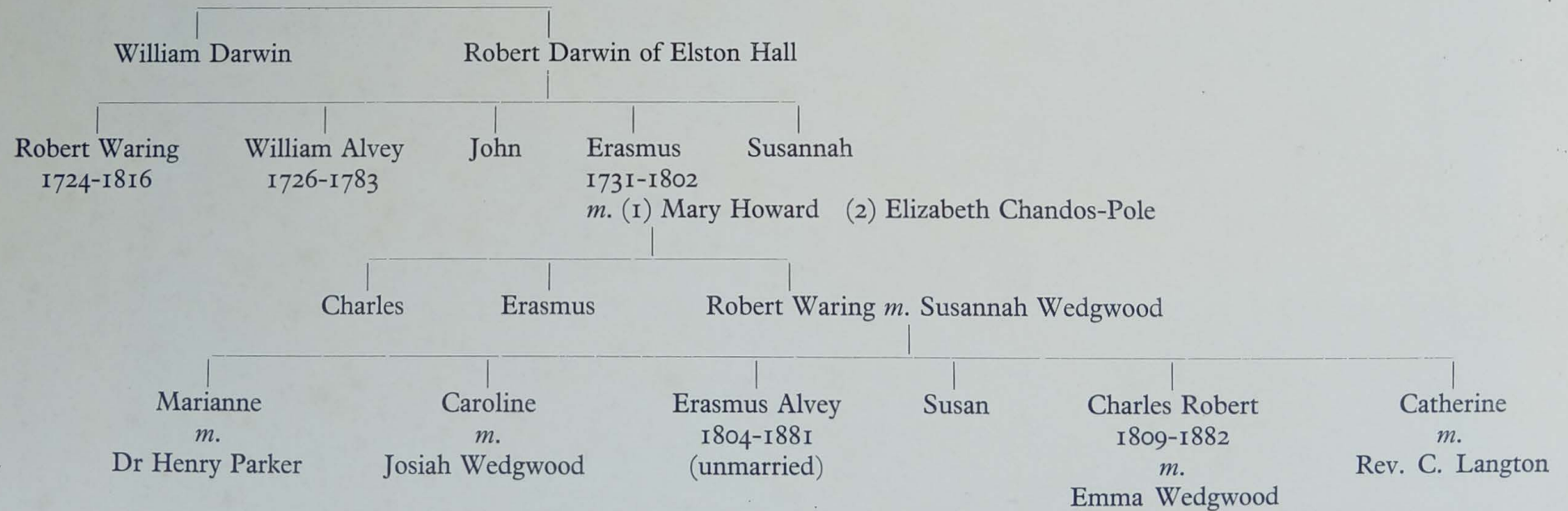
William Darwin of Marton, near Gainsborough, *c.* 1500

Richard Darwin (great-grandson)

William Darwin of Cleatham, *d.* 1644

William Darwin, *m.* daughter of Erasmus Earle, Serjeant-at-law
b. 1620

William Darwin, *m.* heiress of Robert Waring
b. 1655



Printed at THE DARREN PRESS LTD., Edinburgh.