

MEMOIR OF JEREMIAH HORROX.

WE are familiar with the names of some writers who have contributed scarcely anything of real value to the literature of their country; whilst we are ignorant of the worth of many others who occupy a distinguished position in the commonwealth of science. Thus few persons have heard of JEREMIAH HORROX, although his merits an astronomer have been acknowledged by the most eminent scientific men who have succeeded him. But he lived in obscurity, and died young. He was not permitted by an allwise Providence to carry on his investigations for more than a few short years. He did not even enjoy the satisfaction of publishing his own discoveries. He was cut off in the midst of usefulness, and others have entered into his labors. Hence he is comparatively unknown. Happily his performances, as a skilful pioneer for the advancement of knowledge, are well authenticated,



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and are of sufficient importance to make his name illustrious. He paved the way for some of the most brilliant triumphs of the human intellect. Learned men have freely acknowledged this; and, in tender regard for the memory of one who expired whilst full of hope and promise, have constituted themselves the trustees of his reputation, and set their seal to his ability and worth. It is thought, therefore, that the details of his history may not be unacceptable, especially as his valuable services are now about to be recognised by a monument raised by subscription; and that the disinterested efforts of this young philosopher in search of truth cannot fail to enlist the sympathy and admiration of all who are made acquainted with them.

He was born at Toxteth Park, near Liverpool, in the year 1619. Little is known as to the position and circumstances of his family; but in the scanty notices of him that remain, he is generally spoken of as a person of humble origin. It seems probable, however, from his having been classically educated, and destined for one of the learned professions, that this representation is



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rather overdrawn, and that the Horrox family were not so obscure as they have been described. Liverpool was not then a seat of industry, enterprise, and intelligence, but a place of comparative insignificance; and Toxteth, far from being a wealthy and elegant suburb, was only a little village about three miles distant from it in the County Palatine of Lancaster. It is therefore extremely unlikely that he could have received any considerable advantages in his native place; and in those days, on account of the expenses of travelling and residence, it was not usual for a young man entirely without means to be sent to the ancient seats of learning. Hence we are led to conclude, either that his parents were in easy circumstances, and able to value the benefits of a liberal education, or that the genius of young Horrox attracted the attention, and secured the patronage of some person of distinction. Upon this and other points connected with his opening history, it is to be regretted that we possess so little information; for the auspices under which life commences, and the incidents of childhood, not unfrequently form an interesting

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page in the biography of great men. The school campaign, with its successes and failures, its schemes, friendships and amusements affords ample scope for the display of a boy's taste, talent, and disposition, and gives some indication of what may be expected from him in after life. Thus Isaac Newton, withdrawing from the noisy playground, spent his leisure hours in the construction of water-clocks, and other mechanical contrivances; Halley set up a sun-dial, and had observed the variation of the needle before he left school; Watt took an early pleasure in the manual exercises of his trade; James Ferguson made a watch of wood-work when quite a boy; and it is reasonable to suppose that Horrox in like manner shewed a partiality for the pursuits in which he afterwards than ordinary promise were admitted to the University much younger than they are at present, especially if introduced by an influential patron; hence we are not surprised to find that as soon as Horrox had received the rudiments of education at Toxteth, he was entered at Emmanuel College, Cambridge, before he had attained his fourteenth



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year. The following is a copy of the Register:

"Jeremiah Horrox. Born at Toxteth, Lancashire.

Entered Sizar, 18 May, 1632."

His having been placed on the college foundation, tends to confirm the surmise that his parents were not affluent, and that his advantages had hitherto been limited. But we know from the history of others who have attained to eminence in the several departments of learning, that the aspirations of genius cannot be wholly crushed by poverty, but that it will rise superior to circumstances, as surely as a blade of grass breaks through a clod of earth, and points its spire to the heavens. Horrox hailed with delight his removal from the village school to a seminary abounding with the means of intellectual improvement, and resolved to make the most of his opportunities. Having read the few subjects which were then included in an academical education, he explored the wide field of classical literature, readily yielding to its allurements, and regarding them as more than a compensation for any amount of labor. particularly cultivated the best Latin authors, in order to become familiar with a language which



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was then the only medium of communication amongst the learned. In this way he acquired a large store of general knowledge, and was enabled to gratify his taste for any favourite pursuit. In a word, he drank deeply at the Castalian fount, and by his industry repaid the effort that had been made to send him to Cambridge.

But whilst he was fully capable of appreciating the advantages of an University, he did not remain at college longer than was absolutely necessary, being desirous of preparing for the work of the ministry, which he had adopted as the profession of his choice. Some doubt has been entertained as to whether he was ever admitted into Holy Orders. Young men are now required to be twenty-three years of age before they can be ordained, whereas he was not more than twenty. This objection might easily be answered by the fact that two centuries ago the question of age was not so strictly attended to, the Bishop exercising a discretionary power. But fortunately we are able to place the matter beyond conjecture; for in a treatise by John Gadbury, the compiler of almanacks, there is mention of



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"Ephemerides of the planetary motions, eclipses, conjunctions, and aspects for fifty years to come, calculated from the British tables, composed first by the *Reverend* Mr. Horrox, and first published by Jeremy Shakerley."

He commenced his ministerial labours in his native county, being ordained to the curacy of Hoole, in Lancashire. This place formerly consisted of a narrow strip of land, having a large extent of moss on the east and west, the waters of Martin-Mere and the Douglas on the south, and the overflow of the Ribble on the north. therefore almost an island; and though doubtless an open situation for an astronomer, it could not have been a very agreeable residence. once desolate spot is now a thriving township containing about a thousand inhabitants. hand-loom and power-loom furnish their chief employment, though much of the land has been reclaimed, and is under tillage. The Parish Church, which was erected in the fifteenth century, is dedicated to Saint Michael, and consists of a plain brick nave without side-aisles, a chancel, and a stone tower supported by four pillars. There has long been an endowment for educa-



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tional purposes, and about eight years ago a good national school and school-house were built after a plan by the government architect, at a cost of £600. Mr. Horrox's first letter from Hoole is dated June 1639, and he continued to reside there for some little time. There is no local record of his official connexion with the place, as it was not then constituted an ecclesiastical district, being merely a chapel of ease to the mother church of Croston, the register of which is comparatively modern; but that he was curate of the parish is a matter of history, for to omit the testimony of other writers, we may mention that Costard, an eminent astronomer who lived at the beginning of the last century, designates him as 'a young clergyman of Hoole, near Preston." There is reason to believe that, besides his ministerial avocations, he was in some way engaged in tuition, as he speaks of his "daily harassing duties" during the time he resided there.

It was whilst he was at the University that he first turned his attention to the study of astronomy. With a love of the sublime, and naturally fond of speculation, in the contemplation of the



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works of God he found a pursuit at once congenial to his taste, and calculated to bring into active exercise the highest powers of his mind. not satisfy him to look with an untutored eye upon the sun, the moon, and the stars shining in the firmament of heaven; he desired to learn something of their magnitudes, their distances, the periods in which they perform their revolutions, and the laws by which they are governed. "It seemed to me," he says, "that nothing could be more noble than to contemplate the manifold wisdom of my Creator, as displayed amidst such glorious works; nothing more delightful than to view them no longer with the gaze of vulgar admiration, but with a desire to know their causes, and to feed upon their beauty by a more careful examination of their mechanism." Animated with these convictions, he prepared to enter upon the study of astronomy by first cultivating with the utmost patience the aptitude for mathematics which he had evinced from his youth. But he had to work without assistance; for at that time, no branch either of mathematical or physical science was taught at Cambridge. In



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this respect she was considerably behind her sister University. Many scientific men had already emanated from the cloisters of Oxford. Bacon, Sacrobosco, and Greathead, were educated there. In short, the renown which Cambridge has acquired, and now enjoys in this kind of learning, is of a comparatively recent date. Certainly she had no school for science before the commencement of the seventeenth century. This was owing to the endowments of Oxford being older and richer, and to its collegiate system being earlier established. Thus he had no professional instruction; he could not obtain in the University the books he required; nor was there any one capable of advising him as to which it was most desirable for him to procure. This was particularly the case in reference to astronomy, which had scarcely yet taken root in our land. Its votaries had no measure of experience to consult, no body of doctrine to quote. Not a single public observatory had been erected either in England or France, nor indeed had astronomical observation as yet become fairly organized. The difficulty there was in obtaining works on physical science, may be