

Life of Mr James Short, Optician.

By the Right Honourable the Earl of Buchan.

MR JAMES SHORT, an eminent optitian and constructor of reflecting telescopes, was the son of William Short, a joiner in Edinburgh, and Margaret Grierfon.

He was born on the 10th of June old stile, in the year 1710; a circumstance which gave occasion to his being named after the unfortunate Prince, on the anniversary of whose birth he came into the world.

At ten years of age, young Short was entered on the foundation of George Herriot, his father and mother being now dead, and the circumstances of the family very scanty.

His genius for mechanics appeared about that time, in cutting out and joining little chests, book-cases; and such like conveniences for

himself, with the tools that came in his way; and by these means he distinguished himself, and rendered himself useful and popular among his companions. At twelve years old, he was put to the High School of Edinburgh, where he generally kept at the head of his form, and shewed a considerable taste for classical learning. This prompted his friend to destine him for a learned profession; and a pious grandmother, to select him for the church.

After having been four years at the High School, then taught by Mr Arbuthnot, he went, in the year 1726, to the University of Edinburgh, where he passed through a regular course of study with applause; took his degree as Master of Arts; and, at the earnest solicitations of his good grandmother, attended the Divinity Hall, and passed his trials to fit him for a preacher in the church of Scotland, in the year 1731.

Soon after this, the mind of our young artist began to revolt against the idea of a profession so little suited to his talents; and having had occasion to attend a course of Mr Maclaurin's mathematical class, in the College, he soon lost all relish for his ecclesiastical prospects; and made so great a figure in the class, that the professor took great notice of him, and invited him often to his house, where he had an opportunity of knowing more fully the extent of his capacity.

It is much to be wished, that the early and natural symptoms of genius in children were more attended to. It is very true, indeed, that they generally imitate what they see about them, and that no conclusions can be drawn from the scratchings of a child in a painter's house, or the cutting of sticks in a carpenter's; but a genius manifested without any such concomitant circumstances, strongly evin-

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ces the bent of the mind, and should be carefully attended to and fostered by those to whom the care of youth is intrusted.

In the year 1732, Mr Maclaurin kindly permitted Mr Short to use his rooms in the College for his apparatus; and there he began to work in his profession under the eye of his eminent master and patron, who, in a letter to Dr. Turin, about two years after, takes notice of the proficiency made by Mr Short, in the casting and polishing of the metallic specula of reflecting telescopes: "Mr Short," he writes, "who had begun with making glass specula, is now employing himself to improve the metallic. By taking care of the figure, he is enabled to give them larger apertures than others have done, and, upon the whole, they surpass in perfection all that I have seen of other workmen."

Mr Maclaurin adds, in the same letter, that Mr Short's telescopes were of the Gregorian construction, and that he had much improved that excellent invention*. This character of Mr Short did him no more than justice; and he was better enabled than most of his contemporaries, to render his improvements effectual, from his knowledge of the principles of optics.

The figure which Mr Short gave to his great specula, was parabolical; not, however, by any rule or canon, but by practice and mechanical devices; such as have hitherto been made public by the ingenious Mr Mudge, and for which he received Sir Godfrey Copley's medal, and the thanks of the Royal Society. This parabolical figure, given to the great specula of reflecting telescopes, had been

* Smith's Rem. on Art. 489.

been formerly pointed out by the great Sir Isaac Newton, as the most necessary attainment for the perfection of those instruments.

Mr Short continued from this time to practise his art with great success; and when, in the year 1736, he was called up to London, at the desire of Queen Caroline, to give instructions in mathematics to William Duke of Cumberland, he had cleared the sum of L. 500 by the profits of his business, and deposited that sum in the bank of Scotland, where it still remains.

While Mr Short was at London, he was elected a Fellow of the Royal Society, and was much taken notice of and patronised by the Earls of Morton and Macclesfield.

Towards the end of the year 1736, he returned again to Edinburgh, and having made several useful improvements in his art during his stay in England, he prosecuted it now with fresh vigour and applause.

In the year 1739, being then at London, the Earl of Morton, his great patron, took Mr Short with him on his Lordship's progress to the Orkney isles, and set him to work on the adjustment of the geography of that part of Scotland. Walter Macfarlane, Esq; of Macfarlane, commonly called in Scotland the Laird of Macfarlane, likewise accompanied the Earl of Morton, and had occasion to make useful and entertaining remarks on the antiquities of that part of the kingdom, which had formerly been very little attended to.

During this expedition, a scuffle happened, by the resistance made by Sir James Stewart of Barra, to the Earl of Morton's infestment on the isle of Barra; but Mr Short being engaged in observing the heavenly bodies, was luckily out of the way; several of
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the Earl's servants having been hurt, and one of them dangerously wounded.

Mr Short returned to London with the Earl, and having now finally established himself there in the line of his profession, his visits to Scotland became less frequent.

In the year 1743, he was employed by Lord Thomas Spencer to make a reflector of twelve feet focus, the greatest that had, or indeed ever has been constructed, except those for the King of Spain, and some others of the same focal distance, with greater improvements and higher magnifiers. The telescope for the King of Spain was finished in the year 1752, which, with its whole apparatus, cost L. 1200.

The instrument made for Lord Thomas Spencer, having fewer accompaniments, was purchased for 600 guineas. Mr Short came to Scotland in 1760, and in 1766, for the last time. And, on the 15th of June 1768, he died of a mortification in his bowels, at Newington Butts, near London, and was buried on the 22d of that month, being the anniversary of his birth. A few days before his death, he had dined with young Harrison, son of the inventor of the time-piece, at his house in Shore Ditch, and had walked from that place in the evening to his own house at Newington Butts.

Mr Short left a fortune of about L. 20,000, L. 15,000 of which he left to two Nephews, and the rest in legacies to his friends. To the Lady Mary Douglass, now Countess of Aboyne, the daughter of his patron the Earl of Morton, he left L. 1000, and the reversion of his estate after the death of his Nephews, if they should happen to have no issue. But this reversionary and contingent succession, the Lady
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Mary Douglas, at the desire of her father, very generously relinquished by a deed in favour of Mr Short's brother, Mr Thomas Short, and his children.