

## William's Childhood in Exeter 1845-1863

On one of her many visits to the Great Exhibition of 1851, Queen Victoria paused in front of a five-foot high glass case in the Arts and Crafts section. It contained a model of the West front of Exeter Cathedral. At first glance it appeared to have been carved in ivory. In fact the model had been made out of the pith of rushes which grow in the Exeter Canal, and had been produced, using only a pair of scissors and a pot of glue, by William Kingdon Clifford's grandmother. The model had taken three years to complete and was correct in every detail. Walter Savage Landor, the art critic, made a valuation of it and it was insured for £3,000 – a huge sum for those days. The Queen was most taken with it and she sent a letter to Mrs Fanny Kingdon congratulating her on her masterpiece.<sup>1</sup> Sadly, no trace of the model can be found today, but a smaller example of her beautiful pith work is still held by the Kingdon family.

Before her marriage, Mrs Kingdon had been Mary-Anne Bodley and was related to Sir Thomas Bodley (1545-1613) who was born in Exeter. He was statesman to Queen Elizabeth and part-founder of the Bodleian Library in Oxford, where his portrait still hangs. He was knighted by King James I in 1603. In many ways he was an academic precursor of William Clifford, for, as well as being a lecturer in natural philosophy at Magdalen College, he was public orator and a brilliant linguist. Another descendent was the famous architect George Frederick Bodley, who designed churches and university buildings at Oxford and Cambridge in the nineteenth century. Mary-Anne Bodley's direct forebears had been in business in Exeter as fringe-makers and coach-lace manufacturers. Mary-Anne's daughter, Fanny Kingdon, married William Clifford, a book and print seller in Starcross near Exeter. It was here that their son, William Kingdon, was born on 4 May, 1845, but no records of the event, apart from the birth certificate, has been traced. The family later took over premises at 23 High Street, Exeter. In 1869 William's father sold the business to C & D Eland and there is still a bookshop of that name in the city. William's mathematical talents were obvious even as a child, and it was always said that he inherited his intellectual abilities from his famous model-making grandmother.

The Clifford family home, where William's mother had been born, is at 9 Park Place, a modest Georgian terrace of 'genteel Dwelling-houses' set back in Longbrook Street. It was noted by George Gissing on a visit to the city.

In a by-way which declines from the main thoroughfare of Exeter, and bears the name of Longbrook Street, is a row of small houses placed above long strips of sloping garden. They are old and plain,



*William Clifford's childhood home. The turret was added later, and the house is now divided into flats. The Exeter Civic Society's commemorative plaque is just visible to the left of the bay window.*

with no architectural features calling for mention, unless it be the latticed porch which gives the doors . . . The little terrace may be regarded as urban or rural, according to the tastes and occasions of those who dwell there. In one direction, a



*A charming, undated miniature, which is the only known childhood image of William Clifford*

walk of five minutes will conduct to the middle of the High Street, and in the other it takes scarcely longer to reach the open country.<sup>2</sup>

Today, the house has an Exeter Civic Society commemorative plaque identifying it as Clifford's childhood home. Park Place was just a short walk from *Clifford's Bookshop* in the High Street. William would have had the run of his father's shop and its stockrooms – a goldmine of reading material for a precocious youngster. In 1857 he may well have walked the hundred or so yards from his home in Park Place, to stand on the nearby bridge and watch the very first South Western Railway steam engine from London pass through. His upbringing seems to have been conventional and strongly religious, but there are very few records of his early life. However, one example of William's mathematical precocity has been remembered. The Clifford family were visiting the Great Exhibition of London in 1851 and staying at William's aunt's home. She noticed that he was very thoughtful while being put to bed

one night and asked what he was thinking about. He replied ‘Aunt Annie, I don’t think you would know.’ It later emerged that he was calculating how many sharp edges of the blade of a penknife could be placed round the wheel of a coach. When he gave his answer, together with the size of the wheel, it was found to be ‘correct to within a few figures’. He was six years old.<sup>3</sup>

The great tragedy of William’s childhood was the death of his mother when he was nine. She was only thirty-five. His father, who suffered from poor health, remarried and had four more children. In 1878, at the age of fifty-eight, he died in Hyères in southern France where he had gone with his daughters, one of whom was delicate. He had been a much-loved and respected citizen and had served the city well as Alderman and Justice of the Peace. *The Exeter Post* carried loyal tributes to him at his death.

William had gained a place at the Exeter Grammar School and was a pupil there for a few months before being sent, from 1856 to 1860, to the Mansion House School, which became known as Mr Templeton’s Academy. This was situated in the impressive Georgian Bedford Circus, which was damaged by bombs in 1942 and later demolished by Exeter City Council. The school had an excellent academic record. William would have been one of about a hundred boy pupils, about half of whom were boarders. When he was fifteen William won a Mathematical and Classical Scholarship to King’s College London. In 1860 he would certainly have been aware of the famous ‘science versus theology’ battle which took place at the British Association Meeting, at which Darwin’s *Origin of Species*, published the previous year, was discussed. The interest of the general public was engaged when Wilberforce was reported in the press to have asked Huxley, in open debate, whether his ape ancestors were on his grandfather’s or grandmother’s side.

At King’s, from 1860 till 1863, William studied in the department of General Literature and Science. In his first year he won the Junior Mathematical and Junior Classical Scholarships and also the Divinity Prize. In the two succeeding years he again won the Classical and the Mathematical Scholarships and the Inglis Scholarship for English language, as well as an extra prize for the English Essay. It was at this stage, when he had time to read in the college library, that he delighted in solving and posing mathematical problems. On 1 September, 1863, he wrote to the editor of *The Educational Times*

My Dear Sir,

I thank you very much indeed for your kindness, and am sorry that I should have given you the trouble of writing to me. I have been on a walking tour in the North of Devon, or I should have written long before. By to-morrow I hope to send you something, and will do what I can to follow out your kind suggestions: but I am a very junior reader myself. I have had it in mind almost from the time I began to fly kites (I have not yet left off) the problem of finding the form of a kite-string under the action of the wind. On a rough trial

the other day, the intrinsic equation seemed not very difficult to obtain; if I get any result I will send it to you tomorrow. I have been trying to construct a second interpretation of mechanical equations, similar to that of tangential co-ordinates, but have failed hitherto. Being a firm believer in the duality of symbols, I should look upon complete failure as a proof that our symbolical system is wrong. You will be amused by my visionary attempt at obtaining a method of inventing problems by the dozen.<sup>4</sup>

William kept up his interest in kite-flying and in 1877 when on holiday with Lucy at a friend's home in Wales, he constructed a kite 'of unusual dimensions, with tail in proportion' with which he hoped to break all previous records of kite-flying. Unfortunately, while they ate lunch, a flock of sheep and their shepherd became entangled in the carefully laid out strings and the experiment had to be abandoned.<sup>5</sup>

He rounded off his scholarly achievements and fulfilled his early promise by gaining a Foundation Scholarship to Trinity College, and went up to Cambridge in 1863. His degree, a BA in Mathematics and Natural Philosophy, was awarded later in 1867. Before he left King's, when he was only eighteen, he produced one of his earliest papers, *The Analogues of Pascal's Theorem*, which was published in *The Quarterly Journal of Pure and Applied Mathematics* in March 1863.

### Notes

1. Reported in. *Devon and Exeter Gazette*. 1911.
2. George Gissing (1857-1903), *Born in Exile*, 1892, Part 2, p. 1. Gissing's association with Park Place seems to be coincidental. Pierre Coustillas, the Gissing authority, has pointed out that it is most likely that Gissing would have known of and been sympathetic to William Clifford's philosophical writings. Both Gissing and W.K.C. were involved in the London Sunday Lecture Society programme. Gissing met and became friendly with Lucy Clifford and notes his meetings with her in his diaries.
3. W. K. Clifford, Vol 1, *Lectures and Essays*, Macmillan 1879, Introduction.
4. *Clifford's Genius Shown as a Boy*, Note contributed to the American Mathematical Monthly, 29, 1922, p. 157-158.
5. Autograph Letter Signed=ALS, William Clifford, 1877, Valehouse Collection.