

### A student's tale from the 1850s

*This is the tale of an Aberdeen student of the 1850s, partly narrative, partly illustrated by some of his own letters. The student was George Middleton Slesser. Like many students, he was one of the large family of an Aberdeenshire crofter. The parish records of Old Deer record 10 children to his parents. They also use the more common spelling 'Slessor' but I have kept the spelling 'Slesser' since it is used in the article quoted below. 'Middleton' was his mother's maiden name. Slesser was short, stocky, a quiet lad who in earlier centuries would likely have disappeared into the background of the local rural community. He was, though, no ordinary student. Slesser was gifted mathematically and in subjects strong on logic. He swept the prizes at King's College in Maths and Natural Philosophy and was persuaded to go to Cambridge University. Thoroughly entering the competitive spirit there, he took the honour of becoming Senior Wrangler against strong competition.*

*The Cambridge 'Senior Wrangler' has been described as the highest intellectual achievement attainable in Britain, probably by a Cambridge man. The honour was awarded for the highest marks in the Cambridge mathematical Tripos final degree exams and it undoubtedly assured the winner of a future professional career in academia, the law or the church if he was inclined to make one. There was, therefore, exceedingly strong competition for the award. The Scottish Universities in mid-19<sup>th</sup> century provided education broadly for boys aged 14 – 19 and it became popular for good students particularly inclined towards natural philosophy and mathematics to continue their education at Cambridge. For the decade from 1858 to 1867, four Senior Wranglers came from King's College, Aberdeen and its successor the University of Aberdeen. All were taught mathematics in Aberdeen by Professor Frederick Fuller and Natural Philosophy by Professor David Thomson. Three were from Aberdeenshire and one from the city itself. George M. Slesser was the first, in 1858.*

*The following article from the Aberdeen University Review, vol. II, pp 220 – 242 [AUP 1915] quotes a number of letters by Slesser that illustrate the life and times of a mid-nineteenth century scholar and events relevant to a number of his contemporaries. Slesser took to tutoring while in Aberdeen to earn some money and was clearly good at it. He tutored James Stirling both in Aberdeen and when Stirling was in his final year at Cambridge that ended when he, too, became Senior Wrangler. Two years after graduating, Slesser was appointed Professor of Mathematics at Queens College, Belfast. He looked set to have a promising career, as Stirling himself comments towards the end of the article, but he died of lung failure at the age of 28 in 1862.*

### Aberdeen's First Senior Wrangler

By P. Giles [Dr Peter Giles MA 1882, Cambridge BA 1887, Master of Emmanuel College]

*Forward*

It has been a surprise to me to find the collection of the few facts here recorded prove so difficult. Though George Slesser's life and mine hardly more than overlapped, I have known many of George Slesser's relations, and in earlier years heard much of him from his brother Alexander. But George died comparatively young, and after the lapse of more than half a century few of his own generation survive; no member of the staff of Aberdeen

University or of Queens' College, Cambridge, goes back to his time; and very little of his correspondence with his kinsfolk has been preserved. It is curious that in Aberdeenshire, which is generally credited with a vivid memory of its distinguished sons, it should have been difficult to discover even at what school or schools Slesser had been educated before he proceeded to the Aberdeen Grammar School. I owe grateful thanks to a very large number of correspondents, but above all to Mrs. Alexander Slesser, Fisherie, and Miss Slesser, Maud, who have most kindly collected for me what family information was still obtainable; to Rev. Robert Slesser, Aberdeen, who, though not of the same family, belongs to the same district, and was at much pains to make inquiries for me; to Mr. Andrew Anderson, Strichen, who, while at Trinity College, Cambridge, was for some time a pupil of Slesser; to Mr. Robert Anderson, who generously copied for me the information to be found in Aberdeen newspapers; to the late Dr Rennet, who, though he did not know Slesser personally, gave me several suggestions as to possible sources of information; to the late Rev. Prebendary Skelton, Lincoln, who was elected a Fellow of Queens' on the same day as Slesser, and who, besides some recollections, supplied the very characteristic photograph; and, lastly, to the Right Honourable Sir James Stirling, Aberdeen's second Senior Wrangler, who was Slesser's intimate friend and, for two short periods, pupil. It is only by Sir James Stirling's assistance, most ungrudgingly given, that this memoir has been rendered possible, and I feel very strongly that it is he rather than I who should have written it.

### *Article*

It is a Cambridge legend that two of George Slesser's contemporaries, struck by the unwonted fact that a Scottish crofter's son had been Senior Wrangler, seized the opportunity of a tour in Scotland to pay a visit to his birthplace. It is still three miles distant from a railway station, but in those days the inquiring visitors would have had to walk or drive a longer distance, for the branches of the railway which run from Maud Junction to Peterhead and Fraserburgh were not then in existence. To an English eye, the bare braes and howes of Buchan, with their rare patches of wood amidst cornfields and peat moss, could not have seemed very attractive. The little farm, of a type well known from the pictures of Burns's Cottage at Alloway, and once almost universal in Scotland, stood on a high crest above the North Ugie, a slow, brown stream, which for a mile or more at this part of its course has cut its channel deep on the braeface—a braeface so steep that on the neighbouring farm of Cabra the ploughman can make his furrow only downhill, the difficulty of scrambling up again being quite enough toil for his labouring team. Northwards, towards the heather-clad hill of Mormond, lies an open rolling valley, with here and there a farmhouse and an occasional tree, but in those days dotted with more than a hundred similar cots, which with two or three exceptions have long disappeared. Eastward the valley is shut in by another long slope, now crowned by a church and a school. A school existed near by the present one, even in those days before School Boards. It was a long, low building like the crofters' cottages; after the School Board built the present more pretentious building, it became a cowshed, and now for many years has been a roofless ruin. Southward and westward the land is richer and



better wooded. Dr Johnson admitting on his visit to those parts that here he found “some forest trees of full growth,”—a compliment perhaps discounted by the local tradition which avers that the great doctor dined less wisely than well with the laird of Strichen, who, as Boswell records, was entertaining his neighbours on a market-day when he and Johnson arrived. Consequently Johnson forgot on leaving to pull down the blinds of his carriage, as he is believed to have done elsewhere in Scotland, whenever a fine tree was descried in the distance.

Stern as the landscape is, the Gaelic names of farms thickly set in this neighbourhood show that here cultivation is of long standing, while the Saxon names along the opposite foot of Mormond are evidence that there the crofter in recent times wrung from muir and moss the tiny plots of grass and corn which lay around his little homestead, till the arrival of the “economic man” swept crofter and homestead away and converted all his acreage into a section of a larger field. The “Langhill” ends in Kininmonth, which is but the Gaelic for Hillhead, and the farm of Hillhead is separated from it only by a burn. If further proof were needed of the old settlement of this countryside, the antiquary would add that behind the crest of the hill lie the ancient churchyard and the ruins of the chapel of Fetterangus, which in the days of William the Lion was already a possession of the great Abbey of Aberbrothock.

At the little farm or croft of Milton of Gaval, long since added to the farm of Mains of Gaval, was born on 27 April, 1834, as the last but one of a long family, George Middleton Slesser. His father's forebears, it seems, had been long settled at the Milltown. His father, Alexander Slesser, was himself, as is obvious from some of his letters which survive, a man above the average education of farmers in Buchan, whether in those days or now. His mother, Elizabeth Middleton, was the sister of Dr. Middleton of New Deer, well known over the countryside as a skilful surgeon. Before George was born, his eldest brothers were already out in the world doing for themselves. By the time that he was fit to go to school his parents moved to Stonehouse of Rathen, a larger and better farm on a warmer soil. The farmhouse was within a few score yards of the parish school, and it was at Rathen School, under the Rev. John Watt, later minister first of Towie and afterwards of Strathdon, that George received his education till a few months before he proceeded to the University.

Mr. Watt was of the best type of the “old parochial,” and to the last keenly interested in education. No minister of his generation probably had a greater influence upon the people of his parish, or with better reason. It was of him that a Donside farmer, who knew him well, said: “Auld John may lay aff his sermon gey like a loon sayin' the Catechis, but lat me tell ye, if there's onything the maitter wi' ye in purse or person, there is no man will gie ye better advice or readier help”. The latter part, at any rate, of this opinion would have been cordially supported by every one who knew him or his parish, and the confidence of his parishioners was fully evidenced by the multitude of dispatch-boxes, containing the parishioners' important documents, which lined his study in the manse of Strathdon.

It was probably on Mr. Watt's advice that the father determined to give his two youngest sons, George and Charles, the advantages of a College education. There was a distinct strain of mathematical ability in the family, and it appears that this mathematical talent was fostered by attendance in the holidays at private classes kept not far from Rathen by Mr. George Hay, who two generations ago had a great reputation in Buchan as a teacher of mathematics and mensuration. The knowledge of land measuring was more in request

among the intelligent farming class in days when there was no authenticated Ordnance Survey to fall back upon. The minister of Rathen, Rev. J. F. M. Cock, who in his day had been first bursar on entering Marischal College and Gray mathematical bursar on leaving it, is reported also to have helped in equipping George and Charles for the Grammar School. Their names, recorded as Slessor, are entered on the roll of the fifth or highest class of the Grammar School of Aberdeen for the year 1848-9. They were not far removed from the era of George MacDonald's Robert Falconer, and though the records of their life in Aberdeen are very scanty, we may suppose they were not unlike those of Robert Falconer and of hundreds of other country "loons" before and since. At one time, like him, they lived in the Spital, the old and rather unsavoury street which in those days was the chief avenue of communication between the Old Town with its University of King's College and the New Town with its rival University of Marischal College. But whether they migrated thither for convenience when George went to College, or whether they lived there while they attended the Grammar School of New Aberdeen, we do not know. From Stonehouse came periodically their brother Alexander, with supplies of oatmeal and potatoes and other necessaries or luxuries which he could bring that long journey of over forty miles in his cart. In 1849, George, after a few months' polish at the Grammar School under the famous Dr Melvin, obtained the 20th bursary and entered King's College, while Charles stayed on at the Grammar School for another year and entered as twelfth bursar in 1850.

At this time King's College, which in the previous generation appears to have lagged behind its rival in the New Town, had been fortunate in obtaining a very competent teacher of applied mathematics in the person of David Thomson, the Professor of Natural Philosophy, who was appointed in 1845. In his early days he was far from popular because he demanded of his students a greater preliminary knowledge of pure mathematics than, under the system of mathematical teaching then in vogue, they were able to reach, and failures were rife in consequence. But just when it was important for George Slessor, the appointment to the mathematical chair of Professor Frederick Fuller who had been the fourth Wrangler at Cambridge in 1842 and afterwards Tutor of Peterhouse, a strongly mathematical College, provided both necessary teaching and sympathetic encouragement. Unfortunately, Professor Fuller has left no record of the impression which this thoughtful country boy, who was to become the first of the four Senior Wranglers whom he sent from Aberdeen, made upon him. But from the beginning neither Fuller nor Thomson was in any doubt as to his merits, for he carried off the first prizes in their classes throughout the course. In the classical subjects he cut no figure, and in fact, apart from the lists in mathematics and physics he appears only as the fourth prizeman in Moral Philosophy, but for some reason now unknown declined the prize.

Of Slessor's thoughts and feelings and doings during the four years of the Aberdeen course very little record survives. In a letter to his brother, undated, but fixed to the winter of 1850-1 by a reference to his father's illness, he says: — I have put a letter to Mr. Hay into the envelope of this, and any of your folk may go over with it [from Stonehouse] to him, and he will give them the book.

This was Slessor's first session of Mathematics, and clearly Mr. Hay and he had been discussing some subject of the course. On 1 January, 1851, he writes to his brother William: — This is the first day of the New Year. We do not go to College today, and I suppose the town of Aberdeen will be sufficiently thronged with people. I hope this Year will begin a new

era in our father's recovery since he has been ill the most of last. ... I have been very busy at my lesson this while, for we have a most splendid class of mathematics as was ever at King's College, I suppose.

The long seven months' vacation which Aberdeen students enjoyed in those days Slesser seems to have spent mostly at Stonehouse or at Whiterashes, Technuiry, to which the parents had migrated, leaving Alexander as farmer in Stonehouse. He gave himself no airs as a "Colleginer," and is reported to have got up in the early mornings and taken a hand at hoe or harvest with his brothers and their men. He even found it possible to apply his mathematical knowledge to agriculture. His eldest brother John was a blacksmith, and had become foreman to Mr. Sellar of Huntly, who was then making the experiments which resulted in his producing a plough far superior to any that had yet been in use in the North. Aberdeenshire has so prospered in agriculture during the last sixty years that it does not always remember that not every farmer then had an iron plough, and that the days were not far past when a competent person could make a wooden plough in the course of a long forenoon. For the turning of a proper furrow the shape of the mould board is of very great importance. On a visit to his brother at Huntly, Slesser discussed this with Mr. Sellar, who ultimately solved the problem successfully. I owe this information to his son, Mr. R. H. N. Sellar of Huntly.

When the four years of the Aberdeen course were completed, in 1853, George Slesser was barely nineteen years old. Professor Fuller suggested that he should next proceed to Cambridge and made inquiries at his own College of Peterhouse with regard to the possibility of his admission. As it happened a redoubtable Glasgow mathematician had been already entered there, and it was ultimately decided that Slesser should try for a Sizarship at Queens', which at that time, thanks to the lectures of William Magan Campion, its later President, had a high reputation as a mathematical College, a reputation justified by its having the Senior Wrangler in 1857 and 1858 as well as many other high Wranglers in these and other years. But before Slesser could contemplate a career in Cambridge the question of ways and means had to be considered. The family were in more prosperous circumstances than they had been when the numerous children were still young, but the expenses of Cambridge were something very different from those of Old Aberdeen. The railway had reached Aberdeen only a few years before and the journey by it to Cambridge would be very expensive. England was a terra incognita. At the end of his fourth session Slesser had won the Simpson Prize of £60 for mathematics, and during the following months had so much private teaching that besides keeping himself he was adding to his little store. But in Cambridge there would be no friendly cart from Rathen laden with oatmeal and potatoes, and besides the Professors there were Aberdeen students already at Cambridge who could warn him that where expenses were reckoned by shillings in Aberdeen they ran at Cambridge into sovereigns. He confided his difficulties to his brothers; they held a family council, and although some of them were already married and might have felt they had burdens enough of their own, they determined to stand by their brother and see him through. But as it turned out their aid was never needed. In 1854 he obtained a Sizarship at Queens' which was soon converted into a scholarship. In 1855 he won at the University of London an exhibition offered for mathematics. It was tenable for two years and, though only £30 in value, it was sufficient with Slesser's other emoluments to supply all his needs.

The eighteen months between graduation at Aberdeen in March, 1853, and admission to Queens' College, Cambridge, in October, 1854, were mostly spent in Aberdeen. How they were occupied will be seen by the following extract from a letter to his brother William: —

96 Spital, 19 November, 1853.

Dear Brother,

We received by the carrier a bag of potatoes, and have had some diets of them, and they were really first-rate. I hope you will excuse my not writing sooner, I am now very busy indeed. I have eight hours of private teaching; and I require to be up every morning by six to go to an hour's teaching from seven to eight: and it is generally nearly twelve at night before I get through. The lateness of the work arises from the circumstance that they are all students whom I teach, and consequently I cannot put any of it by hand during the hours that they are in at their classes. . . . Charles has three hours of private teaching, I think, more than he should have undertaken seeing that he has his own studies to attend—however one always likes to be making money when they can. . . .

How carefully the Aberdonians weighed the advantages and disadvantages of membership of the various Cambridge Colleges may be seen from the following letter written by Slesser to Professor David Thomson in response to an inquiry as to the best Colleges for other Aberdonians to enter. Two University Commissions have since those days entirely changed the College system of Oxford and Cambridge, and the curious way in which scholarships are calculated seems as strange to Cambridge men of the present time as it must have done to the Aberdeen students of the fifties. The Aberdonians of that day and long after were not only naturally interested as to the Colleges where the best teaching in their subject was to be found—as, for the next thirty years at least, all mathematicians went to a “coach” for the whole or the greater part of the course, the College teaching was of less importance—but also, being mostly poor men's sons, they wished to know where the best scholarships were to be had and where there was ultimately the best chance of obtaining a Fellowship. In the days when most Fellows were bachelors in Holy Orders, and the permanent staff maintained by Colleges was small, changes were more frequent than at the present time when Fellows may marry and every College feels bound to provide permanent teachers in a great variety of subjects. For this reason Prize Fellowships awarded on the results of Tripos Examinations are now, in all but the largest Colleges, few and far between. Sizarships, it may be well to explain, are endowments tenable only by undergraduates of very limited means, and are held by persons so qualified who have not been able to obtain scholarships. In the few colleges where they survive nowadays they are generally not tenable with a scholarship, and in some cases their emoluments are greater than those fixed by statute for entrance scholarships. It is amusing to observe that of the three Colleges which in 1855 are signalized as having their Fellowships restricted (by their Elizabethan statutes) to Englishmen, and therefore as being unsuitable for Aberdonians, the Masters of two and the Senior Tutor of the third are now Scotchmen. The Trinity men are not required to be very High Church, as the previous clause might lead a casual reader to suppose, but to be very high in the University Examination lists. The use of this letter and of the other Cambridge letters which follow I owe to the kindness of Sir James Stirling.

Queens' College, Cambridge, 23 April, 1855.

Dear Sir,

I duly received your favour of the 11th, and I have since then made some inquiries about the different Colleges, the results of which I shall now let you know. Clare Hall is principally a classical college, so far as I can learn, and most of the good things are given to the classical men. The Sizarship there is worth about £30 and is in the gift of the Master, and may be held along with a Scholarship. The principal open scholarships are four of £40 and four of £20 together with 3s. 3d. a week during residence, and these are so arranged that one of each class is vacant every year. There are other scholarships, one of £20: one of £14: one of £40 with preference to natives of Rutland, and a great many small scholarships worth from 2s. to 6s. a week. At Pembroke most of the scholarships are appropriated to particular schools; the Sizarship is worth £12: and there are six scholarships of £28 and four of £14 and four of £12 for Greek all open: and a deserving person may hold more than one scholarship, and as the number of men there is always very small, a good deal of encouragement could be given to a deserving person. At Caius there are no Sizars, but they have besides scholarships of inferior value, twenty-three scholarships of about; £20, one of £28, three of £36 and one of £60, besides a number of exhibitions which may be held by scholars, three of £18: four of £14 to all of which the Master presents, and three of £10. These are held till the Lady-Day after B.A. At Queens' there is first the Sizarship, whose value I do not yet know; the first Sizar is made chapel clerk at his second Christmas, which is worth about from £25 to £30 according to residence. The scholarships are for the first May, five of £15; second May the first two may have £40; third May the first two may have £50. There is, however, a very good man entered here already and if he compete for the Sizarship I am afraid he would gain it, as he is expected, with pretty good reason, to do very well indeed; of course that cuts off both Sizarship and Chapel Clerkship.

At Clare, two of the ten senior and two of the nine junior fellows are not obliged to take orders. At Pembroke, eight of the fellows are not obliged to take orders; at Caius, three or more of the twelve senior and twelve of the junior need not take orders.

At Queens' only two of the fellows may be laymen, but the others are not obliged to take orders till nearly seven years after B.A. These are the most important particulars, that I could think of. In many of the Colleges the fellowships are restricted to Englishmen, as Christ's, Emmanuel and John's: In some the men are exceedingly high church as in Jesus and Magdalene; Trinity requires the men to be very high indeed, or they have no chance of a fellowship, and Corpus has turned out four men last Christmas who will take the fellowships which fall vacant for some time to come. So that I think the four Colleges I have mentioned seem to be on the whole the most eligible for them. I was very sorry to see from your letter, that you had been in so severe illness, I hope the Summer's rest and fine weather will soon show their salutary influence by effecting a complete cure. Our lectures commence again tomorrow, the 24th: and our examinations come on, about the 28th of May. My studies since I came here have chiefly been employed in extending my knowledge of those subjects of which I had acquired some knowledge before, and I find it no very hard task to go on successfully after the grand elementary ideas have been firmly beaten into me by previous lectures and optional questions. If there be any other thing that I can do here to assist you in fixing upon a College I shall be most happy to do it, as I remember who was put to trouble on my account.

I am,

Yours most truly,

Geo. M. Slesser.

D. Thomson, Esquire.

For Slesser's life in Cambridge the first-hand information of Sir James Stirling is invaluable. I have also had the advantage here of a few reminiscences from the late Prebendary Skelton, who along with Slesser was elected a Fellow of Queens' on 5 February,

1858, and from Rev. W. O'Farrell Hughes of Emmanuel College, now resident in Cambridge, whose father knew Slesser and who remembers him as a visitor in his father's house in Cambridge. All dwell on his shy, retiring temperament and his sense of humour.

*“We were intimate friends,”* says Prebendary Skelton, *“though, owing to our both being engrossed in our reading for the mathematical tripos, we did not see very much of one another: . . . but we had walks and teas together in term, and more frequently in Long Vacation. He was in every way a man of sterling qualities though not one to let these be prominently displayed. . . . As an undergraduate he diligently observed College rules and routine, including attendance at Chapel, though he was, I suppose, by upbringing a Presbyterian. I have also a sub-conscious recollection of an instance of his real goodness—his feeling and expressing concern for a man of his own year of fine parts who was ruining health and prospects by a habit which we deplored. . . . A silent man he did not shine in conversation at High Table or in Combination Room. But he had his views on general topics and could discourse intelligently and profitably on them.”*

Mr. O'Farrell Hughes's father and mother came to live in Cambridge when he entered the University in 1857. Through a friendship which sprung up between Mr. Hughes, senior, and Slesser, the latter became a visitor in the family, taking part in quiet parlour games and easily out-stripping the others in solving puzzles of a mathematical kind. In the Slesser family it is a tradition that when he was unable to solve a problem he used to go to bed and found he could solve it in the morning, while his brother Charles could not rest or sleep till he had arrived at a solution. Mr. Hughes remembers that Slesser related how in the night before the Mathematical list was published he dreamt that he was Senior Wrangler and woke up well satisfied. Falling asleep again, however, he dreamt that he was Second Wrangler and woke feeling that this also was a good position though less satisfactory than being Senior. But when he woke up a third time, having dreamt that he was Third Wrangler, he thought it would be well to dream no more. On Mrs. Hughes remarking to him that the disappointment which others must feel at their position in the list might detract from the pleasure of success in being Senior Wrangler, Slesser jestingly replied that *“he bore the disappointment of others with true Christian resignation”*. He is also reported to have made up his mind to learn to skate one winter when there was a very hard frost, and going to a quiet part of the river towards Grantchester by himself was able to do so at once without accident.

But it is from the following letters which Sir James Stirling has most kindly allowed me to use, and from his own characterisation of Slesser which follows, that one can best learn to know the man. The first letter shows something of the surprise, by no means confined to Slesser's time, that of classics at least an English schoolboy knew as much as the “Master of Arts of an ancient and honourable University”. In truth till very recent times the education of the two countries has run on very different lines. In England almost till Slesser's time the English Public Schools had taught very little but Latin and Greek, and the very best boys from the best Public Schools had a width of reading in the classics and a power of handling the classical languages which in Aberdeen at least it was not possible to attain. As Sir James Stirling shows, the modicum of Greek required at entrance to the University was small indeed,—at an earlier day Professors had resisted the teaching of Greek in schools as an encroachment on their privileges. In dealing accurately with a piece of historical prose for Latin composition wherein appeared a certain amount of Oratio Obliqua the Aberdonian, at any rate the Aberdonian who had passed through the classes of Dr. Melvin or of Dr. Melvin's

pupils, had little to learn from anybody. Though the product might be without form, it was certainly not void. But beyond historical prose, composition was not carried, and it was a good many years after mathematicians had begun to go to Cambridge before Aberdeen classics were able to make any mark in either Cambridge or Oxford. But the Aberdeen education was very much wider than the Cambridge or the Oxford education, and the Aberdonian, though he had learnt but little of any one thing, had learnt that little very soundly. By the variety of subjects of which he was required to profess some knowledge he learnt how to learn and also to recognize where his own strength lay.

The most remarkable performance of an Aberdonian is that of Sir James Stirling himself, who having obtained the Simpson Greek Prize at Aberdeen proceeded to Cambridge and became Senior Wrangler. His contemporary who carried off the Simpson Mathematical Prize was the later Professor John Black, who also changed the subject of his studies and held the Chair of Humanity from 1869 to 1881.

For most of the information regarding the persons mentioned in the letters I am indebted to Sir James Stirling.

Hewitt, the competitor for the Sizarship who was awarded a gratuity, migrated from Queens' to Emmanuel and graduated as Thirteenth Wrangler in 1858. He was afterwards Fellow and Bursar of Emmanuel, and later Rector of Preston in Suffolk and for some years English chaplain at Alassio.

E. J. Stone, who stayed back a year, was Fifth Wrangler in 1859, afterwards Astronomer Royal at the Cape of Good Hope, and ultimately Radcliffe Observer at Oxford, where he died in 1897.

Dougall (Dugald) Christie, a younger brother of Rev. Dr. John I Christie, Professor of Church History in Aberdeen University, was for many years schoolmaster of Kildrummy.

Machray was Robert Machray of Sidney Sussex. He had been Simpson Mathematical Prizeman at Aberdeen in 1851. From his biography, published in 1909, it appears that he was a bad examination candidate, and he was only Thirty-fourth Wrangler in 1855. He was, however, elected a Fellow of Sidney, was for some time Vicar of Madingley, interested himself in mission work and went to Canada, where he was for many years Bishop, afterwards Archbishop of Rupert's Land, and Primate of all Canada. He died in 1904.

R. E. Fiddes, son of the parish minister of Kinellar, entered Clare College in 1856 where he was a scholar. He *“unfortunately broke down in his third year and died of lung disease after a lingering illness. He was a man of acute intellect and a keen mathematician: if his physical powers had been equal to his mental, he would have had a high, perhaps the highest, place in the Mathematical Tripos.”*

P. M. Clarke, who had been at Marischal College, Aberdeen, entered Sidney Sussex and was fourteenth in the second class (Senior Optime) in the Mathematical Tripos of 1858. M. T. Cormack had divided with another the Hutton Prize at King's College, Aberdeen, in 1851, had entered Queens' College, Cambridge, and was bracketed fourth Senior Optime in 1856. He was ultimately Headmaster of the City Freeman's School (Corporation of London), Brixton.

The "Glaswegian" was the present Hon. Sir Charles Abercrombie Smith, Honorary Fellow of Peterhouse. He was Second Wrangler and Second Smith's Prizeman in 1858, and was later Vice Chancellor of the Cape University, and Controller and Auditor-General of Cape Colony. Porter who set the papers was W. A. Porter, Third Wrangler, 1849, not his younger brother James Porter, Ninth Wrangler in 1851, long Tutor, and from 1876 to 1900 Master of Peterhouse.

Gerard B. Finch was Senior Wrangler in 1857, a Fellow of Queens' and a barrister. He returned to Cambridge and for some time taught law at Queens', of which he was later an Honorary Fellow.

T. Skelton, bracketed Sixth Wrangler, 1857, was elected a Fellow of Queens' on the same day as Slesser. He was afterwards for some years Principal of the Bishop's College, Calcutta, and later on a Prebendary of Lincoln, where he died early in the present year. Trinity was not very successful in the Tripos of 1857, and Hensley, as forecast, was not equal to Finch and Skelton, being bracketed Thirteenth Wrangler.

All the Cambridge letters which follow were written by Slesser to his friend and pupil Stirling. Slesser had come up from Aberdeen to London by sea when first coming to Cambridge. He went home only during the Long Vacation, and from incidental references it appears that while some of the other Aberdonians also did not return home in the shorter Christmas or Easter vacations but paid visits to London or elsewhere, Slesser remained at Cambridge. In earlier times this had been the general custom, and from Christmas to Twelfth Night the Colleges, which are now deserted at such times, kept open house. Slesser's means would probably not have admitted of the frequent visits to the North which are rendered possible for students now by the greater speed of trains and the greater possibilities of travelling provided by the larger emoluments of modern scholarships.

In the fifties of last century athletic sports were much less carefully organized than they are now, and survivors of that period are sometimes inclined to look with contempt on the feeble folk of the present day, who, unlike them, do not vanquish their opponents at cricket on Parker's Piece in the afternoon and find places in the College boats the same evening. If an undergraduate rows in his College boat nowadays he has not much time or opportunity for other forms of athletics. But besides rowing Slesser was also fond of shooting. The year 1859, when he was a resident Junior Fellow of Queens', saw the rise of the Volunteer movement. Whether in connexion with it or otherwise, Slesser provided himself with a very fine rifle which remained in Queens' for a long period after his death and was returned to his relatives less than twenty years ago.

Queens' College,

7th Nov., 1854.

My dear Sir,

I suppose you have been thinking that I had forgot my promise to write to you, but really up to this moment I had nothing decisive to tell you. We were examined for the Sizarship on the 18th and 19th of October, and the result was not known till to-day, so that they kept us about twenty days in suspense. When I came away from Aberdeen I had no idea of the proficiency of the men who came up here to read, so that I was a little taken aback, when I heard how much each one had read, and there are some first-rate classics here too, can read Greek off-hand and turn Shakespeare into Iambic verse.

Having such competitors (and there were ten tried for the sizarship) you will not wonder though I was rather diffident about my success; especially as I was not well pleased with the manner in which I performed I the classical piece; however as it always turns out that fortune favours the brave, she has taken it into her head to favour me this time, and I am the only Sizar; there used to be two or three, so that I should expect it to be more valuable when condensed into one. A gratuity of; £10 has been conferred on Hewitt, who is a very good Mathematician, just such like as yourself; and the other eight of the ten have been disappointed. We have some very good men in our year, there was one of the name of Stone, very highly spoken of by some, but he has left today, and is to stop back till another year, so that I will not have the advantage of him at least as a spur to my laziness.

I have been using the book you so kindly lent me a good deal and find it to be a most useful one. I have been working, as yet busily enough, and I intend to work well, all the time. I suppose your Session has just commenced and you will now be grinding the Greek very hard. But you will spare time to write me very soon; with that hope

I am yours Faithfully,

Geo. M. Slesser.

Queens' College, Cambridge,

17th January, 1855.

My Dear Stirling,

I have now received two very kind letters from you since last I wrote you, and I now take up my pen more for the sake of easing my conscience, than with the hope of being able to write you a letter: the fact is I have been writing so many letters to Scotland that I quite forget what I wrote to each individual, so that I am afraid to begin to write about the affairs of this place lest I should be merely sending you the same story as I sent you before. There is one question that I at present remember to ask you, and that is whether Dougall Christie be at College. I sent a long letter to him, but as I have not heard from him, it has entered my head that he may have been obliged to leave College through a sickness or any other accident. The Examinations for the degree have been going on for the last fortnight and will continue for another week. It is very hard work here, they get two papers every day here while it continues and as the number of questions is always more than can easily be done in the time, the men are of course working with all their might for the time. I am afraid the high expectations of your friends about Machray will be disappointed: the fact is an Aberdonian has not so high an idea of a senior wrangler as he ought. Machray is expected to be among the first twelve Wranglers and that is here considered as by no means contemptible; for if there be a good Mathematician in all England, he is invariably sent here: so that there are always a good many very clever men to contend with. I have not had any examinations since I was examined for the Sizarship, and will not have till May. We were lectured on Euclid for the last term. We will be lectured on Algebra next term. We have at present a vacation of about seven weeks: the lectures begin again on 31st Jany: and you will hear of Machray's fate by about the 27th Jany: the men are graduated on Saturday, the 27th January. I hope you will excuse the shortness and dryness of this letter: and with many thanks to yourself and your Father for the kindness I have always received from you, I am, My Dear Stirling,

yours Faithfully,

Geo. M. Slesser.

James Stirling, Esq.

Queens' College, Cambridge,

3rd April, 1855.

To the Hon. James Stirling, M.A.

I was very glad to see, what I knew very well long ago, would be seen and *heard tell of* that you had come off so triumphantly in the classical warfare in which you engaged. I most sincerely congratulate you on the many high honours with which you have been loaded.

Simpson prize of £60.

Moral Philosophy No.  $x$  and  $x < 3$ .

Humanity prize No.  $y$  and  $y < 3$ .

I am afraid you will be so elated with victory, that you will not condescend to look upon a poor groveller like me.

I have no doubt you have worked hard for your rewards but I hope you have not in the least hurt your health thereby.

I suppose you will allow yourself a little recreation now, and mayhap visit other mountains than Helicon and other streams than those of Castalia.

I suppose you have not forgotten, notwithstanding all your honours, that there is a place called Cambridge, where a certain M.A. meditated to reside for some time and study Mathematics, and finally come out Senior Wrangler, or the next thing to it. Perhaps you could tell how this honourable M.A. now thinks with respect to this. All that I would say to you about this, is that you need not let your hopes be damped by the fate of Machray, for he did so badly, that I am almost inclined to think, he had rather got worse than better here.

I suppose that is an overstatement but he did so badly as quite to surprise me. I suppose you know that Fiddes is coming to Cambridge but I think that it would be to his advantage to stay a year and read. We are now enjoying the Easter Holidays, I have taken this opportunity to refresh my weary limbs, by a day or two of easy amusements, and I hope to be able to work more heartily when I begin again.

The Examinations here come on about the end of May, but I do not expect to return to Aberdeen before the end of July, as I have some intentions of trying for a Scholarship in London, for which the examinations take place in July. And it is even possible that I may not return to Aberdeen even then, as the tutors press me rather hardly to stay here during the long vacation, and read with a tutor, as most of the men who expect a good place in the tripos, generally do. Of course I should like very well to obey them in this, if it were not so expensive, but on that account I am very doubtful about the matter. If you come to the resolution of trying your fortune here, I think you ought to come to Cambridge, and read in the long vacation with a tutor, in the same way as Clarke did last year. A tutor would draw you forward wonderfully, and the expense would, in my opinion, be money very well laid out. I suppose you will now stand in need of your Todhunter's Statics. How shall I be able to send it to you? It is a very excellent book and has been of much service to me, but I could now spare it, for I think I know it. Cormack is going on here in his own style, he is not very clever, and not too industrious, and his hopes are not very high; he thinks however he will beat Machray and spite Professor D. Thomson.

Clarke, I believe, is in something like the same condition, and expects to beat Machray, though I am told Machray thinks differently. The Glaswegian who was entered at Peterhouse, before Fuller proposed my entering there, has shown himself a sturdy fellow; he has beaten lots of good men of higher years, in problem papers given by Porter of Peterhouse. But I am afraid I have diverged into matters which will not interest you much: so wishing all good things to shower abundantly on your learned and honoured pate,

I am,  
yours Sincerely,  
Geo. M. Slesser.

Queens' College,  
8th January, 1857.

My Dear Stirling,

I received your letter this forenoon, I was very glad to find that you had not entirely forgot your new Alma Mater or the creatures who are condemned to stay there. I hope you have enjoyed yourself very much, and that you will come up again strong like a giant refreshed, and that your cold and other grievances will beat a precipitate retreat. I have been here all the time; Fiddes was down at London about a fortnight and has come up again. The examination is just going on, the first three days' work is over today. Our men Finch and Skelton have been doing very well as yet. In the three days' problem paper Skelton did thirteen problems and Finch fifteen, I am afraid your Hensley can't come up to that. I should be very well pleased with the paper like that specimen you sent me for I think the paper is very good, and I think you may get me a package of that.

If you see Cormack again, scold him for me with all your power, and you may tell him that I have got the information he wanted for him, if he would only write to keep me from forgetting to send it, and congratulate him on the high place his friend Finch is going to take.

Hoping to hear from you or see you soon and with my best wishes for H your health and happiness this new year, and many happy returns of the B season,

I am,  
My Dear Stirling,  
Yours most sincerely,  
G. M. Slesser.

To J. Stirling, Esq.

Cambridge tradition relates that Slesser's marks were double those of the Second Wrangler, but as the same statement is made of so many Senior Wranglers it may not be trustworthy. The local papers of the day, however, state that it was believed that the Senior was far ahead of the other Wranglers. This is the foundation for the brief account of Slesser's success contained in a letter to his brother William from his sister Isabella who was then the Headmistress of the Girls' School, Strichen. The prize to which she refers is the Smith's Prize, in those days awarded to the most successful in a separate examination which was occupied entirely with the solution of problems.

Strichen. Sunday.

*We have today received a bit of good news, which will, I am sure, rejoice all your hearts. . . . George has come off Senior Wrangler and a good way before the other two great lights, who in their turn are far before the rest. I got a newspaper from George today and a letter from Charles. George has another examination for some prize so he has not time to write but you'll likely hear from Charles soon.*

Slesser's position as Senior Wrangler was assuredly well deserved. But like most men of his physical type he looked older than he really was, and amongst undergraduates of the time there was an impression that the great success of a small college like Queens' in having the Senior Wrangler two years running had been achieved only because the candidates were much older than the ordinary age, and therefore necessarily better equipped mathematically than those who were younger. As a matter of fact Slesser was not more than a year older than the average, and his early training had been much less systematic than that supplied by an English Public School, while Mr. Finch, the Senior of 1857, I am assured on very good authority, had had no mathematical training and stood only third in the college examination at the end of his first year. But in Sir George Trevelyan's *The Cambridge Dionysia*, which

appeared in November, 1858, the undergraduate view is recorded where Gyp A and Gyp B talk of their undergraduate masters: —

Gyp A Honest Philoleon, for his first three years  
 Led a most quiet and gentlemanly life.  
 He was not gated more than twice a term;  
 He read three hours a-day, rode every week;  
 Last year pulled seven in our second boat.  
 In all things moderation was his motto.  
 But now he's gone stark mad;  
 and you must guess What sort his madness is. [*To the spectators.*]

Gyp B That Queens' man there  
 Says that he's bent on being Senior Wrangler.  
 Gyp A No, no; he won't be old enough these ten years.

In the narrative of the gathering of the crowd of revellers which precedes this dialogue occurs another and more kindly reference. "Here came a mob of Queens' men, sweeping the street, and roaring at the pitch of their voices, 'For he's a jolly good fellow,' referring probably to the late Senior Wrangler."

Sir James Stirling's account of Slesser as a man and a mathematician needs no commentary.

#### **Sir James Stirling's Account**

I first became acquainted with G. M. Slesser at King's College, Aberdeen, in 1853. He had been for about three months in the autumn of 1849 at the Grammar School of (New) Aberdeen under Dr Melvin, then head master, with the object of perfecting himself for the Bursary Competition at King's College in October of that year. I was then at the same school, but had not reached Melvin's classes, and knew nothing of Slesser at that time. I do not think Slesser appreciated Melvin very much; I remember that he once said to me that he thought him very "rude" to his pupils. Melvin, though a kindhearted man, was somewhat stiff in his manner, and could on occasion express himself very incisively or even (though rarely) apply a heavy hand to a pupil who displeased him; but I do not suppose for a moment that Slesser ever suffered in this way; his remark, I believe, only indicated his repugnance to anything that appeared to be harsh.

However this may be, Slesser was a successful competitor at the King's College Bursary Competition in October, 1849, though not (I think) very high. At that time the bursary examination papers were limited to Latin ("Version" or translation from English into Latin and also a piece of Latin prose to be translated into English) and Greek (a portion of a prescribed author)—I think (at that time) some chapters of the Gospel of St. John.

During the session 1849-50 the only classes Slesser had to attend were the Latin and Greek. Before his second session began, Fuller had become Professor of Mathematics in succession to Dr Tulloch, so that Slesser had the advantage of being taught mathematics on the Cambridge lines from the first. In the Mathematical and Natural Philosophy Classes, which he attended in his second and third sessions, he was *facile princeps*, being first in every examination. He took his degree in 1853, carrying off the Simpson Mathematical Prize. He was then advised by Professor Fuller to go to Cambridge, and after some hesitation he

resolved to do so. Fuller would have liked him to enter at his own college, Peterhouse, but it was discovered that C. A. Smith, a pupil of Professor W. Thomson (afterwards Lord Kelvin) of Glasgow, was already entered there. It was essential that Slesser should enter at a College where he would be sure to get whatever was to be had in the way of scholarships, and Queens' was chosen. He went up to Queens' in 1854. During the interval between his taking his degree at Aberdeen and going to Cambridge he remained in Aberdeen, principally occupied in preparing himself for Cambridge, but also doing some private teaching. In the summer of 1853 I became a pupil of his: he taught me the elements of the subjects taken in the third session at King's College, viz. Advanced Mathematics (analytical geometry and differential and integral calculus) and Natural Philosophy (mechanics): and I owe a great deal to his tuition. He used to come to my father's house for an hour three times a week to give me lessons, but besides that we had frequent walks together, and he became on most friendly terms not only with myself but with all the family, who were very fond of him.

During his first year at Cambridge he had no private tutor, but had the benefit of the lectures of W. M. Champion (Fourth Wrangler, 1849), then College lecturer in Mathematics (afterwards tutor and ultimately master). He always told me that Champion's lectures were excellent.

After his first year he coached with Routh, who had taken his degree in 1854.

In July, 1855, he competed for and gained a scholarship in the University of London awarded to the candidate for B.A. degree who was most distinguished in Mathematics.

Among his contemporaries at Queens' there were several good mathematicians, including C. B. Clarke (Third Wrangler, 1856); G. B. Finch (Senior Wrangler, 1857); and E. J. Stone (Fifth Wrangler, 1859), all subsequently Fellows of the College. I know that with each of these three he had discussions on mathematical questions, which were no doubt stimulating, though my impression is that to each of them he imparted more than he received.

Slesser attended a course of lectures on Astronomy by Professor Challis at the Cambridge Observatory; and two courses of lectures on Hydrodynamics and Optics by Professor Stokes, whom he greatly admired. He read most of Stokes's published papers and made abstracts of many of them for his own use.

At the degree examination his most formidable competitors were C. A. Smith of Peterhouse (Second Wrangler and Second Smith's Prizeman) and Wace of St. John's (Third Wrangler). I never heard any particulars of the marks, but have always understood that Slesser was distinctly first both in the Tripos and the Smith's Prize Examination. One incident of the Tripos examination he told me of. He was very successful on one problem paper, sending up answers to most of the questions. He soon found out after getting back to the College from the examination that he had gone wrong in working out one problem and failed to arrive at the proper results. After the Tripos List had been published he spoke to the proposer of the particular question and was chagrined to find that he had not been awarded any marks for what he had done, the reasons assigned being that he had not got the right result and that his mode of solution was unsuitable. Slesser admitted, of course, that he had not got the right result, but satisfied the examiner that his method was suitable and indeed better than that by which the examiner had himself arrived at the result. I well remember his saying to me (more in sorrow than in anger): "I ought to have had some marks for what I did".

Slesser was an all-round mathematician, good in every subject. In Rigid Dynamics he made an independent discovery of formulae and methods of proof which have now become

classical: see Routh's "Rigid Dynamics" (ed. 1905), Vol. I, p. 206; Vol. II, pp. 4, 286. He contributed to the "Quarterly Journal of Mathematics" the following papers: — On the Motion of a Body Referred to Moving Axes, Vol. II, p. 341; Note on Areas and Volumes in Trilinear and Quadriplanar Co-ordinates, Vol. II, p. 357; Notes on Rigid Dynamics, Vol. IV, p. 65; Notes on Trilinear Co-ordinates, Vol. IV, p. 134.

Much greater contributions to science might have been expected from him had his life been spared.

Slesser became a Fellow of Queens' College a few weeks after he took his degree, and immediately began to take pupils. I went up to Trinity in October, 1856, and finally left Cambridge at the end of May, 1860. While in residence, I generally saw Slesser once a week, and frequently oftener: and we were on most intimate terms. At his instance I began to read with Routh from the beginning and continued to do so until the end of the May term in 1859. At that time Routh had been appointed Junior Moderator in the Mathematical Tripos of 1860, and as I was to graduate in that year he could no longer retain me as a pupil. He suggested to me that I should read with Hopkins, but it was my firm belief that Slesser was only just inferior, both as a mathematician and a teacher, to Routh himself, and on my expressing to Routh my strong desire to go over to Slesser he assented. So I became his pupil again during the Long Vacation and Michaelmas term of 1859, and my confidence in him was amply justified. I have never altered my opinion of his merits. I still think that he had a large share of that "easy mastery" over the whole range of his studies which has been most justly attributed by Lord Rayleigh to Routh.

During the Long Vacation of 1860 Slesser remained at Cambridge, but we corresponded, though I have not been able to lay my hands on the letters I received from him. In the autumn he was appointed Professor of Mathematics at Belfast in succession to P. G. Tait, who had been chosen to succeed Professor Forbes at Edinburgh. For a couple of days in October, 1861, Slesser and I were both in Aberdeen. He called at my father's house while I was out, and waited for a good while to see me, but I did not return until he had left. I called at his address next day, but he had gone: and to my great regret I never saw him again.

As regards his appearance, he was about five feet six inches in height, square built, rather ruddy in complexion, his hair dark with a distinct tinge of red. He often walked with a slight stoop. He had considerable muscular strength and was very fond of active exercise, particularly of rowing, being always ready to take an oar in the Queens' College boat when there was room for him. In a letter which I received from him after he had gone to Belfast (but which I have been unable to find) I remember a remark that "*a boat would be an addition to his comfort*". While in residence at Cambridge he discontinued rowing (at all events for a time), owing to a slight attack of haemorrhage, which did not trouble him long, but may have been the beginning of the lung trouble which afterwards proved fatal.

Most of his reading (other than mathematical) was more or less of a scientific character, as for example Whewell's "History of the Inductive Sciences". I do not think he read much poetry except perhaps Burns, nor was he a great reader of novels, though he did a certain amount in that way.

Shy and reserved with strangers, he was most genial with those who knew him. His intellect was of the clearest: and he was gifted with strong common sense as well as a keen sense of humour. No man was ever more devoid of bumptiousness. He was a devoted friend and most lovable man.

If Slesser did not intend to take Holy Orders in the Church of England the tenure of his Fellowship at Queens' would have been limited to about six years, even if he did not marry. The bar, the other main avenue to a livelihood for a distinguished young graduate sixty years ago, he probably considered impossible for him, owing to the long period of waiting for a practice which it often entails. He therefore naturally looked out for work as a Professor of Mathematics, and for this an opening was found by his appointment to the Chair of Mathematics at Queen's College, Belfast, in 1860.

It has been impossible to get much information regarding this period of Slesser's life. His brother Alexander attributed his early death to the fact that at Belfast he lived in a chilly, damp house, and that in his absorption in his mathematical work he would sit far through the night when the fire had long gone out. He is remembered as very shy and retiring at a Professorial evening party. Possibly such entertainments may have been more cheerful in Ireland than elsewhere. In other Universities a professorial "perpendicular" has been known to damp even mercurial temperaments.

That Slesser was well satisfied with his work in Belfast is shown by a reference in a letter from R. E. Fiddes to James Stirling. It is misdated 1860 for 1861.

Montebello house, Victoria street,  
Ventnor, Isle of Wight,  
January 1st, 1860.

I have had a note from Slesser. He seems to be liking it well. He has seventy or eighty sons of Erin at present in tow; he said he was rather afraid to face them at first, but he found no more difficulty with them than if they had been the Pope's Brigade. (These are not his expressions; they are only my version, so that you had better [not] say Pope to an inhabitant of Belfast.)

Like many good scholars when they first begin to teach he seems to have been too much in advance of his class, but as I have not been fortunate enough to get first-hand information from any mathematician who was under him, the evidence is not worth much.

In the summer of 1861, Slesser spent about two months in Dresden with Mr. Andrew Anderson, son of Sir Alexander Anderson, Lord Provost of Aberdeen. He coached Mr. Anderson, then an undergraduate of Trinity College, Cambridge, for the Mathematical Tripos.

At the end of two years' teaching in Belfast it was clear that there was something very seriously wrong with Slesser's lungs. He made up his mind to winter in Egypt, and began to make arrangements for a voyage to Alexandria. His friends at Queens' College, Cambridge, were shocked at his appearance and doubted whether he could stand, in his weak state, so long a voyage, which included the discomforts of the Bay of Biscay. A friendly medical man sounded his chest and advised him not to attempt it, but to winter at Torquay. The report to the Fellows of Queens' was that there was "a hole as large as your fist in Slesser's lungs". To Torquay accordingly he went and established himself in lodgings. As is not uncommon in lung troubles, the end came unexpectedly. His relatives did not know how dangerously ill he was, and he seems not to have communicated his condition to any of his friends. His landlady had no idea who he was, and when the end came found difficulty in discovering or communicating with his relations. As soon as the news reached the family, Slesser's brother Alexander set off for Torquay, but the funeral had taken place some time before he was able to reach a place so distant. Slesser died on the 3rd of December, 1862, at the age of twenty-eight.

It has often been said sarcastically that in the multifarious curriculum of Aberdeen the Professors forgot to include any knowledge of the laws of health, and to the methods of work which prevailed in Aberdeen University in Slesser's time and long after has often been attributed the high proportion of the best students of Aberdeen who have passed away early in life. How far Slesser's premature death is attributable to this, it is now impossible to say. But at least one of his brothers died of a similar complaint in middle life, although he had never studied in the University. How great was the promise cut short by Slesser's death it is easy from Sir James Stirling's sketch of the man to judge. As was well said by an English newspaper of the time, he belonged to the class "of poor young lads who came from the northern Scotch schools, and taught the best and highest of our southern youth what application and earnestness might achieve".

*John S. Reid*  
2017