

A black and white portrait of Professor Sydney Ringer, an elderly man with a receding hairline, wearing a dark suit and a white shirt with a dark tie. He is seated, with his hands resting on his lap. The background is dark and indistinct.

A brief biography of
Professor Sydney Ringer MD FRS
(1835 - 1910)

**Physician, Physiologist &
Pharmacologist**

**Benefactor of the
Restoration of St Mary's**

Sydney Ringer (1835*-1910)

An unsung hero of Biomedical Science and Medicine Parishioner and Benefactor of St Mary's, Lasingham, Nth Yorks

The booklet inside this cover was published in 2007 to mark the unveiling of the plaque in the wall near the south porch of St Mary's that commemorates Professor Sydney Ringer, MD FRS. The plaque was sponsored by The Physiological Society (founded in 1876 and of which Ringer was an early member – see www.physoc.org). The Society has over 3,000 members worldwide and publishes one of the longest-established and world-leading scientific journals, *The Journal of Physiology*.

Physiology is the science broadly described by the phrase 'how the body works'. Rather more grandly, it is also known as 'the scientific basis of medicine'. Right from when he qualified as a young doctor in London, Ringer conducted scientific research that still underpins modern physiology and pharmacology and thus medicine. Ringer did this research whilst running a large medical practice and also working as one of the premier Professors of Medicine in Britain. He worked at University College and its hospital, 'UCH', in central London. Apart from many scientific and medical papers, he published important textbooks that were translated into several languages and helped define the pattern for such books that is still followed today.

Ringer's most important work was to establish a suitable composition for 'physiological saline', the life-saving fluid in the 'drip' bottles one sees in every hospital ward and surgical theatre. An outline of this work of truly world-wide significance is given in the booklet.

Ringer became connected with Lasingham through his marriage to Ann Darley. When away from London, their second home was at *St Mary's*, the cottage immediately facing the north side of the church, on Anserdale Lane.

The booklet gives an insight into the Ringer's family life in Lasingham and in London, as well as something of Ringer the man and his pioneering work as a physician, educator and scientist of the first rank.

**See p(ii) below for details)*

(i)

REGISTER OF BIRTHS.

Sydney Son of *John Ringer*
and *Ann* his Wife, of the parish of *St Mary's at Plain*
in the city of *Norwich* was born on the *Seventh* Day
of *March* 1835
Registered the *25th* Day of *March* 1836
By me *William Brock* {Protestant
Dissenting
Minister.

Above: The birth record for Sydney (not "Sidney" *sic*) Ringer from St Mary's, Norwich. The chapel was founded at the end of the 17th century. It stood in St Mary's Plain and survived in various guises until 1942 when the building was destroyed by German bombing.

Ringer's Birthday - A Correction

This cover-sheet allows me to make an important correction to the original text '*A Solution for the Heart*' (2007). It turns out that Ringer was indeed born in 1835, just as his gravestone reports, rather than 1836 as I had concluded in my booklet (see p8). My confusion came from studying the records (at St Mary's, Norwich - see above). There are many pages of births recorded at dates near to Ringer's, but in March 1836. (This Baptist church recorded dates-of-birth as no baptism of the very young take place for this denomination – my earlier text is error on that detail too). In almost every other case, the date of birth is just a few months (at most) before the church record. Thus, I concluded that the year of birth was a slip-of-the-pen by William Brock the 'dissenting minister' (a slip like his misspelling of Sydney's own name). However, on further study, I found that one of few other such examples of date 'discrepancy' applies to Sydney's elder brother John Melancthon. He was recorded in April 1834, but as having been born in November 1832. It seems that the Ringers, and just one or two other families in these records, were in the habit of postponing the recording (and associated service of dedication) for a year or more after the birth of their children. Thus, the other strands of evidence that had suggested 1836 to be more likely date must also be discounted.

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Annie Ringer's Window

The face of the young girl depicted with Jesus is that of Annie Ringer (1868-75) in whose memory St Mary's, Lasingham, was restored at Sydney and Ann Ringer's expense in 1879 (see p4, p17); it matches the photo of her still kept in the church vestry. It was dedicated by Olive Talbot (1842-1894). She lived in Cavendish Square, a near-neighbour of the Ringers in London, the daughter of CRM Talbot, the millionaire iron and docks tycoon, after whom Port Talbot was named.

The glasswork and design is by Ulisse De Matteis (?1827-1910) and colleagues, of Florence, one of the five large De Matteis windows at Lastingham, *almost* unique in Britain. The only other recorded example (before my first visit there in 2013) was of a single window at *All Saints*, Harthill. Now several De Matteis windows have been revealed there and I have established the connection with Sydney Ringer's family (p17). (A further example located elsewhere in England is currently being investigated.)

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A solution for the heart

by David Miller

The life of
Sydney Ringer (1835–1910)

*Professor of Medicine, University College London
Benefactor of St Mary's Lavingham, North Yorkshire*





The only known portrait of Sydney Ringer (*R Faulkner & Co, 21 Baker Street, London*)



Cover image based on a photo by Lisa Inoue of (1991). This Japanese artist draws inspiration from Ringer's life and work. This image, one of a series *Ocean of Ringer*, alludes to an old idea of the blood 'inner sea', but especially that saline – like the sea reaches across the world.



Tokyo
called
as an
itself -

A solution for the heart

The life of Sydney Ringer (1835*–1910)

Professor of Medicine, University College London, Benefactor of St Mary's Lastingham, North Yorkshire, UK

by David J Miller

Honorary Research Fellow, *quondam* Reader in Physiology, School of Life Sciences, University of Glasgow, Scotland, UK

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Sydney Ringer FRS, MD (born 11 March 1835¹, died 10 October 1910)

Parishioner & Benefactor of St Mary's, Lastingham, North Yorkshire

Physiologist, Pharmacologist & Professor of Medicine, University College London

Sydney Ringer lies buried in the churchyard of St Mary's, together with his wife Ann (née Darley) and their elder daughter Annie, in whose memory the church was extensively restored in 1879. Ringer is the scientist and clinician most properly credited with 'inventing' physiological saline, most familiar as the 'drip' seen in operating theatres and hospital wards. Physiological saline is the salt solution that allows the body's tissues to function normally for a time, even when isolated from the blood supply. It can replace blood in many clinical circumstances. As one of the scientific fathers of this life-saving liquid, Ringer deserves to be as well-known as others whose names are associated with the great advances of medical science.

This booklet tells the reader something about a remarkable scientist and doctor who was associated with the village of Lastingham and its church for most of his adult life. It gives some insight into life in Lastingham in the 19th century, as well as Ringer's career as one of the leading London medical and scientific men of his day.

¹ See p.8 for details of Ringer's actual birth date

Introduction – Ringer and St Mary's Church

Sydney Ringer, known simply as 'Dr Ringer' to the parishioners of Lastingham, was the benefactor of the restoration of their ancient church of St Mary's in 1879. The work commemorates the tragic death of his daughter, Annie. It has often been reported that she choked on a plum stone at her 7th birthday party on 13 July 1875. However, she had actually suffered a brief, fatal illness caused by an intestinal obstruction. That unusual problem can, very rarely, be triggered by something as trivial as an undigested plum stone. She died at the family home in London, despite being attended by England's leading surgeon^b and with her father present. Annie's body was brought to Lastingham. Thus, her grave is in the village where her parents had their second home, near where her mother had been born and where Annie enjoyed many happy holidays and weekends.

Ringer's benefaction of £4,000 would be worth perhaps a quarter or half a million pounds today. He commissioned the prolific Victorian church architect, J L Pearson^c to restore St Mary's. Pearson was then also working on his masterpiece, Truro Cathedral, and other projects. He had designed Christ Church at nearby Appleton-le-Moors. St Mary's restoration created one rare feature of this beautiful pilgrimage church, the stairway direct from the aisle into the ancient Norman crypt dedicated to St Cedd (show below).



Visitors will see Ringer's name, and those of members of his family, in several of the windows around the church; one is illustrated on p. 5. (Oddly, Ringer's Christian name is spelled as 'Sidney' in several of them. He remarked in his will that '*... my birth was registered at St Mary Baptist Chapel, Norwich and my name is spelt there Sidney although I have always spelt it Sydney*').

Annie Ringer is named on a brass plaque, near the South Porch Door, that acknowledges the 1879 restoration. The altar step bears a very similar inscription: '*This church was restored to the glory of God and in memory of Anne Ringer by her father and mother MLCCCLXXIX*' (if you know your Roman numbers, you'll spot the mistake).

^b Professor Sir John Eric Erichsen (1818-1896), President of the Royal College of Surgeons, Surgeon to Queen Victoria and Holme Professor of Surgery at University College London, the companion Professorship to Ringer's own in Medicine.

^c John Loughborough Pearson, RA, RIBA (1817—1897) Details of the restoration, including the plans and the previous appearance of St Mary's, can be found at the church web site (www.lastinghamchurch.org.uk/church_guides/guide_sml.html).

Introduction – Ringer and St Mary's Church

Sydney Ringer's name now appears on a recent twin to the original plaque (fortunately his birth-year given there as was eventually proved correct; see p.8). The plaque from 2007 reads:

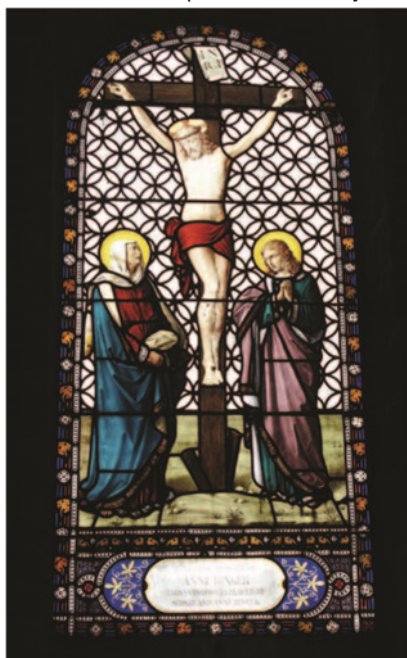
**TO THE GLORY OF GOD AND IN MEMORY OF SYDNEY RINGER MD, FRs,
1835-1910, EMINENT PHYSICIAN & SCIENTIST OF
UNIVERSITY COLLEGE HOSPITAL, LONDON, & LASTINGHAM, AND
SOMETIME CHURCHWARDEN OF THIS PARISH. HIS RESEARCH FIRST DEFINED
PHYSIOLOGICAL SALINES', THE BLOOD-REPLACEMENT FLUIDS THAT HAVE SAVED
COUNTLESS LIVES AND ENABLED SO MUCH MEDICAL, SURGICAL
AND EXPERIMENTAL WORK THROUGHOUT THE WORLD, TO THE BENEFIT OF
ALL MANKIND.**

The plaque, like this booklet, was sponsored by The Physiological Society. Founded in 1876, The Society is the professional body for physiology researchers and teachers in the UK. Its international membership also includes scientists and clinicians in sister disciplines such as pharmacology, biochemistry and medicine. Ringer was an early Member; many of his research papers appeared in *The Journal of Physiology*. They have had a great influence on the development of the subject.



Annie Ringer, above (photo courtesy of St Mary's Lastingham).

Main window (behind the altar), right; though dedicated to Annie by her parents, it has 'Anne', 'Sidney' and 'Anne' each misspelled. It names the designer of the five windows in the chancel as the Florentine glassmaker Ulisse De Matteis (?1827–1910).



Ringer's Solution – physiological saline

Ringer was a famous Victorian biomedical scientist and a well-respected physician at University College London (UCL). His name lives on today because of the physiological saline that bears it. The composition was first properly defined by him, especially by his research from 1880 to 1884. He studied the heart to find out which ions² in solution keep the strength and rate of the heartbeat normal. The heart's pumping action, and the electrical activity that triggers it, are sensitive to small changes in the concentrations of sodium, calcium and potassium that bathe it. These effects are still being studied today, but their physiological basis was completely unknown in Ringer's time. He first revealed the critical role of calcium in the heartbeat; we now know that calcium is essential for all types of muscle and cell movement, as well as many other vital processes in the body.

Ringer's findings do not just apply to the heart; saline can compensate for lost blood in the short-term survival of all tissues. Saline essentially compensates for lost blood serum³. Ringer's Solution has facilitated a great range of biomedical research, especially on isolated cells, tissues and organs. Many variants have been developed, but they are all refinements of Ringer's archetype recipe.

Apart from saline's scientific uses, the clinical drip is a familiar application. Research into blood transfusion and saline as a blood substitute was prominent in London during the 1870s and 1880s. Patients can safely accept saline into their bloodstream, often overcoming the immediate problems caused by blood loss without a transfusion. Drip bottles are now a common sight in operating theatres, hospital wards and at accident sites; one version of the drip fluid is still known as Lactated Ringer's or Hartmann's Solution. It is the fluid commonly used worldwide during surgical operations and also post-operatively. Like the original Ringer's solution it contains salts of sodium, potassium and calcium.

It is hard to imagine the difficulties Ringer faced compared with today's sophisticated methods and the ready availability of pure chemicals. A key to his new ideas came when he realised that his technician, Mr Fielder, had been using ordinary tap water rather than distilled water. The changes Ringer saw in the heartbeat suggested a role for the salts present in tap water. He was working at UCL; London tap water is 'hard': it contains potassium salts and almost as much calcium as the blood itself. In a much-quoted phrase from his paper of 1883 he reported thus:

^d Ions are electrically-charged atoms or larger groups found in salt solutions. Once dissolved, salts such as table salt (sodium chloride) or bicarbonate of soda separate into their chemical components. Metallic elements such as sodium, potassium or calcium form positive ions, cations, others such as chloride or larger groups such as phosphate or bicarbonate form negative anions.

^e Serum: this is the liquid part of the blood, minus the blood cells and the clotting proteins. Essentially it comprises water, various salts, amino acids, sugars, *etc.*

Ringer's Solution – physiological saline

'... I discovered, that the saline solution which I had used had not been prepared with distilled water, but with pipe water supplied by the New River Water Company. As this water contains minute traces of various inorganic substances, I at once tested the action of saline solution made with distilled water and I found I did not get the effects described in the [earlier] paper ... It is obvious therefore that the effects I had obtained are due to some of the inorganic constituents of the pipe water.'

The 'inorganic substances' are the various salts. The cliché that 'the rest is history' is appropriate; salines were so rapidly accepted that Ringer's discoveries were being taken for granted even before he died barely 30 years later.

Ringer collected rainwater in Lastingham in earthenware jars. In work done with Dr Harrington Sainsbury⁴ in 1894, he tested its effects on the survival of a common pond-mud worm. The Yorkshire rainwater

would have been 'soft', almost devoid of salts. Ringer confirmed that it behaved just like pure glass-distilled water, allowing the worms to survive, as expected.

Ringer's interest in water quality might even relate to the water mill on his land and its old, but artificial, supplying water course⁵. A 14 foot water wheel was installed in the late 1700s to drive Lastingham's corn mill. It turned for more than a century but has spent the last 100 years static and crumbling. Perhaps Ringer had to interest himself in the chemical purity of the water in order to run and maintain the mill. Certainly, the local water had first been analysed in the 1870s by Durham County Council officials.

Ringer's scientific and clinical contributions are discussed in more detail later. First, we consider his early life and the events before he became associated with Lastingham and North Yorkshire.



Ringer's watermill lies behind the *Blacksmith's Arms* pub. The outflow tunnel is clearly visible, the small building immediately above it houses the disused 'overflow' style water wheel.

^f Harrington Sainsbury (1853–1936), was physician to Queen Victoria, one of the pall-bearers at the funeral of Sydney's wife (1897) and an executor of his will. He lectured at the Royal Free Hospital and the London School of Medicine for Women. Intriguingly, he is one of several Victorian gentlemen briefly suspected of being the infamous killer 'Jack the Ripper'.

^g The water supply was created by the aptly named Joseph Foord (1714–1788). He drew a flow from Loskey Beck, above Hutton-le-Hole, a mile from the watermill. For reasons now obscure, this supply avoided using nearby Ellers Beck that has supplied Lastingham's drinking water for 1300 years.

Ringer's origins, family and education



Sydney and Ann Ringer's gravestone at St Mary's, Lastingham

Sydney Ringer was born in Norwich, but there are conflicting reports of the year of his birth. Most sources, including his own gravestone (above), report this as 1835. However, documents from St Mary's Baptist Chapel in Norwich, misleadingly record his birth as being on Friday 11 March 1836. (See page (ii) at the front of this pdf for a full account). The Census has been taken on dates soon after Ringer's birthday every 10 years since 1841. However, Census subjects are often inconsistent, or disingenuous, in reporting their ages; Ringer was no exception. At the 10-year intervals from 1841 onwards he is recorded successively as 6, 16, 25, 34, 45, 56 and 66 years old. Ultimately, the gravestone date, 1835, proved correct

Ringer's parents, Anne (1801–1872) and John Manship Ringer (1798–1843)

Ringer's mother, Anne, is often misnamed 'Harriet', probably because obituary writers have confused her with Sydney's mother-in-law (Harriett Louisa Darley, 1812-85). She was born Anne Smith in 1801 in Norwich. Little is known of her early life. She was a strong character '*with a singular austerity that to the young in particular was awe-inspiring*'. Her three sons shared a particularly strong affection for her. She lived her whole life in central Norwich. Sydney's father, John, was a wholesaler of foodstuffs, thus usually described as a grocer. The Registrar of John's death, at the age of 44, was the surgeon Benjamin Norgate, under whom Sydney Ringer was to start his medical studies 10 years later.

The Census of June 1841 records that the Ringer family lived off Wensum Street, near the cathedral and old market squares of Norwich, for centuries the trading and commercial centre of East Anglia. Sydney had two brothers, John and Frederick, and a baby sister, Emma Jane. The Ringers' neighbours included: a carter, police officer, straw-hat maker, brush manufacturer, chemist, draper, fishmonger, clockmaker and several publicans, tailors, silk weavers, dyers and shoemakers. Nearby Pig Lane housed coal merchants, more silk weavers, a 'whitesmith' (a maker of tin goods) and a waterman. By 1851, Anne, now widowed, and her two younger sons, 'Syd' and 'Fred', were living at 83 Colegate Street. They seemed financially comfortable with two maidservants and a lodger. Although Anne was 40 in 1841, by the 1851 Census she described herself as 44; one shouldn't ask a lady's age.

Ringer's origins, family and education

Sydney's siblings: John Melancthon Ringer (1833–1900)

John's magnificent middle name refers to the 16th century Christian reformist scholar Philipp Melancthon, an associate of Martin Luther and John Calvin; it signals the Ringers' non-conformist leanings (described later). By the early 1850s, both John and Frederick were 'apprenticed to trade'. John was in Shanghai, China, where he founded the Drysdale Ringer Company that built the city's first municipal water supply in 1883. Could Sydney's simultaneous work involving the chemistry of 'water quality' back in England be linked with aspects of this civil engineering project of his elder brother? Unfortunately, their correspondence has not survived.

John returned to London in March 1875 to marry a young widow, Alice Baillie. The joy of her uncle's wedding was to come just months before Annie's tragic death that July. That March, John stayed with Sydney and his family at Cavendish Place (their London home after 1867). By 1891, John had returned once again from Shanghai to England and was staying at *Glassington House*, near Bournemouth. Also staying there was Edward Holme, the long-time business partner of John's brother, Frederick, in Japan. John Ringer died at Edmonton, Hertfordshire.

Frederick Ringer (1838–1907)

Sydney's younger brother, Frederick, also left home young and headed for the Far East. By 1856, he was a tea inspector in Canton with the English company Fletcher & Co. This is early in the time of the fast tea clippers such as the *Cutty Sark* that = raced competitor's ships to bring the valuable tea cargoes to Europe. After a spell in China, Frederick moved to the Japanese seaport of Nagasaki ^h. Here, he co-founded the Holme Ringer Company with Edward Holme. Initially, they traded in tea, but soon expanded with the developing Japanese industries into shipping, coal, munitions and to exports of seaweed, shark fins and vegetable wax – important items of trade then. In about 1864, Holme left Japan to conduct the London end of the business.

Frederick was one of the pioneers responsible for the 'opening' of Japan to European trade and culture. He became so influential that he was known as the 'King of Nagasaki'. By the early 1880s the Holme Ringer Company served as Lloyds' representatives in Nagasaki, but moved further from the import-export business towards banking, insurance and shipping. It also began to expand overseas, with offices in China and Korea, and conducted trade with Russia. By the late 1890s, Nagasaki was a boom-town and Frederick the dominant foreign merchant there. He started a daily English language newspaper and constructed the fabulous 50-bed Nagasaki Hotel, replete with electricity and a French chef. He finally left Nagasaki in 1907 because of ill health and died in Norwich. He was buried at the non-conformist cemetery at Rosary Road.

^h Much information on Frederick can be found in Harold S Williams *The Story of Holme Ringer & Co. Ltd in Western Japan, 1868-1968*; a copy was kindly given to me by Mr Takemoto of Holme Ringer, Nagasaki where the company still flourishes, though not since 1940 in the hands of Frederick's descendants.

Ringer's origins, family and education

One excitement in Frederick's eventful life was to be shipwrecked on one of his own ships, the *Takachiho-maru*, as it left Nagasaki harbour in fog in 1891. Frederick and 50 other passengers survived to tell the tale. By comparison, his brother Sydney's daily walks back in London, to and from work with his silk top hat and umbrella, seem very mundane.

Emma Jane Ringer (1840–1843)

Sydney's sister, Emma Jane, died young, the fate of many children in Victorian England. Her death was caused by scarlatina (scarlet fever), a far more threatening infection then, given the living conditions and lack of antibiotics. 1843 was a doubly tragic year for the Ringer children as their father died less than 6 months after Emma.

Uncle Samuel Browne (c 1798–1891)

Ringer's uncle, Samuel Browne, was married to Sydney's paternal aunt Mary. They lived in Salhouse, just east of Norwich, where Samuel was the first schoolmaster. Confusingly, a relative called Emma Ringer lived with Browne and his family for about 20 years. This Emma was the same age as Sydney's sister would have been, had she survived. And Samuel went on to marry a younger woman also named Emma (Emma Stone), 10 years after the death of Sydney's aunt Mary. Browne supported Sydney financially during his initial studies. He remained in good contact with his nephew, going on to dedicate two fine windows at St Mary's, Lasingham. He also invested significantly with Sydney's brothers in the Far East.

Ringer's education

Ringer was educated at private schools, virtually the only option beyond the most basic level of schooling at that time. He was first schooled by a Mr Brooke and then was under the Revd Dr E Cobham Brewerⁱ, the author of *A Guide to the Scientific Knowledge of Things Familiar*. One charming anecdote relates that Brewer rashly offered a penny to the boys for each searching scientific question they could raise, but '*Sydney excogitated so many that the offer had to be withdrawn*'. The *Guide* is cast entirely as a set of brief, naïve questions with concise answers and organised thematically: 'heat', 'light', 'weather', etc. Ringer and his schoolmates may have helped Brewer more than they realised for just a penny per question.

In September 1853, Sydney went to study medicine at the Norfolk & Norwich Hospital under the surgeon Mr BH Norgate^j. Medical students then often started their training at local hospitals before transferring to a medical school. Ringer was helped by his uncle Samuel, who perhaps funded this initial hospital placement and

ⁱ Ebenezer Cobham Brewer (1810-1897) was the son of Norwich schoolmaster John Brewer. After graduating from Cambridge University and being ordained, he worked at his father's school, becoming headmaster. There he compiled the *Guide*, his first major work (1st Edn. 1838-40). Its immense popularity funded his travels in Europe. On returning, he worked on his very well-known *Dictionary of Phrase and Fable* (1874), another hugely popular Victorian reference work that is still in print.

^j Benjamin Henry Norgate (1803-1858), FRCS, was Assistant-Surgeon (1828) and then Surgeon (from 1830) at the hospital. He lived in Bank Street, central Norwich.

Ringer's origins, family and education

then subsequently at UCL. It was in London that Sydney studied, then practised, and ultimately taught and researched medicine and the medical sciences.

In 1854, Ringer enrolled at UCL, in Gower Street, Bloomsbury; many leaders of the discipline of medicine taught or studied there at that time. Founded in 1826, UCL was established '*to provide education for all who could benefit by it, irrespective of creed, wealth, race or social class*'. Amongst other liberating influences, UCL allowed young men (but no women just yet) to study without being practising Anglicans, as demanded by Oxford and Cambridge. Schnepf's biographical paper (1973) describes the situation well:

'... the Ringer family was nonconformist. The present day definition of this word is a protestant who is not a member of the Church of England. The definition in 1835 was considerably more forceful and another term used was "dissenter". There were many, and often bitter, schisms between the different factions of the protestant faiths, and feelings, at times, ran high. What was more natural than that Sydney Ringer be admitted to this newer institution whose inception was spurred on by the principle of freedom from religious domination.'

In his early career, Ringer lodged with a Mrs Davis, in Grenville Street, opposite Great Ormond Street Children's Hospital. His London residence for his later professional and married life was at 15 Cavendish Place, just off Regent Street and near Harley and Wimpole Streets, still the location for many leading London medical practitioners. It is also close to UCL and University College Hospital (UCH) where Ringer held clinical posts throughout his career. His house and the neighbouring properties were substantially rebuilt in about 1910, but some older houses still standing opposite show how Ringer's home would have looked during his lifetime.

Ringer's household in London

At each Census after their marriage, the Ringers were residing at their home at 15 Cavendish Place, Marylebone, W1. The Census records (1841–1901) give an insight into their domestic life: four servants were consistently employed to run the affluent household. At the 1871 census, the first after Sydney and Ann had married, all four servants (two maids, a nanny for their daughter and a cook), were from Norfolk. Later, they recruited mainly from Lasingham.

By 1881, Annie had died but their second daughter, Hilda, was by then 8 years old. Hilda's nanny was Hannah Harland, the first servant recruited from Lasingham where her father Thomas (see p. 15) was a tailor. The Ringers' neighbours included an Italian 'Professor of Singing', Cesare Varchetti, and his sister Luigia. Given the reports of their love of music (see later), this must have been a happy coincidence for Sydney and Ann. By 1891, Hilda had a 'school governess', Emma Aurora Fowler. Hannah Harland, now a parlour maid, had been joined by Mary Holliday from Lasingham as 'Lady's maid'. Her family were near-neighbours of the Harlands. Alice Mary Dobson, 25, (mentioned earlier) was visiting. Ann's youngest sister, Florence Margaret Darley, was normally resident^k. (She died in 1907, to be commemorated by Sydney in St Mary's most recent stained glass windows in the west tower wall.) The last Census before Sydney's death was 1901. Mary Holliday, was now the parlour maid (after Ann's death in 1897). She was joined from Lasingham by Lucy Swales. Dr Septimus Sunderland had replaced the musicians at No. 11. Sunderland wrote *Old London's Spas, Baths and Wells*, evidently sharing an interest in water quality with Sydney next door! Hilda was on holiday on the day of the Census; she was staying at Tregarthon's Hotel on the Scilly Islands.

Before reviewing Ringer's later life and work in London, we will consider his time in Lasingham which started at the time of his marriage in 1867.

^k Florence lived with the Ringers after her and Ann's mother's death in 1885. On 5 April, Census day, she was staying with her brother, Bertram (the Curate at Harthill, South Yorkshire) near St Katherine's Royal Hospital, Regent's Park. Bertram was one of the trustees of Queen Victoria's Jubilee Trust for Nurses that had established an Institute for nurse training at St Katherine's.

Living in Lastingham

The Ringers' house, St Mary's, was extended during the Ringers' time from a smaller cottage previously owned by Elizabeth Scolefield. It is on Anserdale Lane, up the hill from the *Blacksmith's Arms* pub, opposite the church. It contains wood panelling removed from the church at the time of the 1879 restoration. A Dr Slater owned the house after Ringer's death and used



The Ringers' house, St Mary's, Anserdale Lane

it as his home and surgery. Then, as now, open fields and moorland lay immediately behind the house. One of Dr Slater's daughters is said to have been 'a little deranged'. She took the house deeds and hid them under a stone somewhere on the moors where they still await discovery. (Pleasingly, the house in the 21st century is once again owned by a medical practitioner, Dr Clemens Heinrichs from Germany)

Ringer's wife, Ann Darley (1835?–1897)

Sydney's wife knew Lastingham from her childhood. The Ringers became regular visitors after their marriage in 1867. Sydney was based in Cavendish Place, in central London, throughout his professional life, so Lastingham was used only for holiday and weekend visits.

Ann was born between 1833 and 1835. She was recorded as 62 on her death in 1897, but the gravestone shared with her husband gives her birth-year as 1833, and thus aged 64. Like her husband, her ages are inconsistent through successive Censuses. She was born at *Spaunton Lodge*, the second seat of the landowning Darleys, Lords of the Manor to Lastingham. The Darleys became established in England at the time of the Norman Conquest. Ann was the eldest child of Henry Brewster Darley of *Aldby Park*, York and his wife Harriett Louisa (née Hudson).

Ann had five brothers, including Bertram (who became vicar of Harthill, near Worksop [see *p(iii)*]; he officiated at Ann's funeral as well as her daughter's marriage), and three sisters, including Florence Margaret (who eventually was to live with Ann and Sydney). Despite Ann being the eldest child, when her father died in 1860 it was Henry Jr, the eldest son, who inherited the estates: these were days of strict male succession. Ann's mother and the other children left *Aldby Park* to live in York. Later, Harriett and Florence moved to *Barmoor*, Hutton-le Hole, where they lived until Harriett's death in 1885. (*Barmoor* is now the home of Mr George Winn-Darley, the present Lord of the Manor).

Amongst other accomplishments, the Darleys were significant for modern horse racing. Thomas Darley, the British Consul in Aleppo (Syria), was one of the first three breeders to bring an Arabian stallion to Britain. The '*Darley Arabian*', lived until 1730 at Aldby Park and sired the modern line of English and American horses: 95% of current thoroughbred stallions can be traced to him. How appropriate that

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the Darleys' ancestor, Sir Edmond de Earle, received his estates from William the Conqueror for furnishing and supervising the army's horses.

Ann's maternal grandparents, the Hudsons, were also from Yorkshire, but her mother had been born in London; Ann and her sister, Adelaide, were educated there at a ladies' school in Norfolk Crescent, near Marble Arch, close to where Ringer was to start his studies at UCL in 1854.

Marriage, 1867–1897

Sydney and Ann married in August 1867 at *All Saints* Church, North Street, York. The Rector, George Guest, officiated. *All Saints* is known today for a strong Anglo-Catholic tradition that would have been very different from Ringer's non-conformist experience (see p. 11). However, this tradition dates only from 1904, when the Revd Patrick Shaw introduced the liturgical ideas of his friend Percy Dearmer (based on the Oxford Movement and Christian Socialism). Thus, at the time of the Ringers' marriage, *All Saints* would have practised a 'Victorian mainstream' Church of England ceremonial. The Ringers were an unusually close and loving couple for their 30 years of married life. Sydney's character is described later; as for Ann, she was:

... affectionate, sympathetic unselfish; her influence upon [Sydney] was great ... she was the staunchest of friends. Their home life was absolutely united; its very sufficiency, indeed, seemed to be in great part responsible for the retired life which they both led ...

Further impressions of Ann's background and character can be gleaned from part of a fulsome tribute in one local press report of her funeral in 1897:

Mrs Ringer undoubtedly loved Lastingham and all its surroundings from early childhood ... she became the dashing horsewoman and the admiration of all around ... riding in that superb manner and with a boldness of spirit which few indeed durst practise ... In married life ... her warmest worldly aspirations were in the hills and valleys of her father's moorland domains, and amongst the honest and simple minded [sic] people who reciprocated that affection which she was ever giving tangible proofs of day in day out ... Her numerous instances of long [term] charity, her intense kindness and other estimable qualities will never be generally known for she knew nothing of ostentatious display ...

Little more can be traced about Ann. There are reports of her artistic skill and she was a talented photographer (with three examples in the National Archives, Kew; one is reproduced at the end of this text, p25).

Living in Lastingham

Victorian train journeys from London to Lastingham may have been hardly more arduous than today. By 1867, there was a good, fast rail service to York

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(by the 1880s, taking about 4 hours) and thence to Malton or Pickering and Kirkbymoorside, with a horse-drawn carriage for the remaining few miles. An impression of rail travel on this route is shown right. The picture shows the huntin', shootin', fishin' set at King's Cross in August 1893, bound for the grouse moors of the north.

Sydney became a leading member of Lastingham parish, even though he and his wife were only intermittently resident there. Parish records show that he was variously a churchwarden

and school manager (of the schoolhouse which was dedicated to his mother-in-law who died in 1885). Some entries from the parish records give a flavour of life then; village and parish politics seem to have just been as fraught as ever:

15 Sunday (1885) [The vicar mentioned here would have been the Revd Richard Easterby] *"A numerously attended meeting was held in the Reading Room Lastingham at 7.30 for the purpose of electing two foundation managers for the Lastingham School – Dr Ringer and Mr Edward Pulleyn were unanimously elected. Subsequently a meeting of the newly elected managers was held in the School where Miss Darley [SR's sister-in-law, Florence] was elected Chairman and Mr J H Weighall Correspondent. Mr Edward Pulleyn refused to shake hands with the Vicar (who had been appointed a Manager by the County Council) on account of his (the Vicar's) 'disgraceful conduct to Dr Ringer and Miss F M Darley' ! in daring to object to their presence at the Spaunton Parish Meeting, they not being Parochial Electors & having no title to be present and vote!"*

(August 1892) [The vicar then was Oxford graduate, the Revd James S Salman]

"The 'Silver' wedding of Dr and Mrs Ringer was celebrated with great rejoicing on the 25th (St Hilda's Day) and a congratulatory address was read by the vicar (1893) The Vicar gave a tea [for] the Sunday School Teachers and a few friends including Mrs & Miss Ringer and Miss Dobson: the Revd Mr Jackson, Vicar of Newton upon Rawcliffe came unexpectedly ... The school children came about 2 o'clock and played croquet and some of the boys played cricket in Dr Ringer's field."

Bulmer's Directory of 1890 offers further insight into village life. The entry for the 'Post Office, professions and trades for Lastingham' names many of the residents and their trades, including: Post Office (sub) at W Wilson Stonehouse's. William Burnett, blacksmith, the Revd John South Davidson, MA, curate, the Revd Richard Dalby Easterby, vicar, Thomas Flintoft, mason, Robert Harland, grocer,



Going North – King's Cross 1893 by George Earl (1824–1908) (courtesy of the National Railway Museum, York)

Living in Lastingham



Lastingham School House (left) and its dedication stone.

tailor, and draper; Thomas Harland, tailor, Arthur Hutchcroft, schoolmaster, Miss Eleanor Jackson, George Middleton, bootmaker, William Parker, pig dealer, Ann Proud, ['victualer'?] Blacksmiths' Arms, Sydney Ringer, MD, FRS, and London, John Sonley, joiner, George Richard Thompson, journalist, Richard Topham, registrar of births, deaths, and marriages, and vaccination officer ... John Trowsdale, assistant overseer for Lastingham and Spaunton townships, and farmer, Charles Ward, mason, John Watson, miller, Richard Wrigglesworth, general dealer, Wilkinson Yoward, tailor, Wm Dennis Yoward, organist, The Vicarage, Farmers:

William Denney, High Askew farm, Walker Flintoft, Thomas Harding, The Grange, John Strickland, junr, John Strickland, senr, James Taylor, Cammile[sic] house, David Watson, High Street, Robinson Wood, Low Askew farm.

The photo below shows a group in the garden of St Mary's House, tentatively dated to 1886. Sydney Ringer is standing in the centre. Ann Ringer may well have been behind the camera. The field behind was perhaps where the boys (mentioned above) played cricket in 1893; the view from this spot is little changed today.



Ringer at home – taken in the garden at St Mary's; apart from Ringer himself (standing centre, pale suit) nobody has yet been reliably identified. (Photo courtesy of the late Mrs Marjorie Paris)

Living in Lastingham

Ringer's wealth and eminence and his wife's family connections provided links to local dignitaries such as Sir Charles¹ and Lady Strickland of Boynton (who dedicated a window at St Mary's). The Ringers probably knew them through Ann's maternal grandparents, the Hudsons of Bessingby Hall which, like Boynton, is near Bridlington. (Ann's maternal uncle, Sir James Hudson [1810-85], is the link to Italy and the Florentine windows that grace St Mary's: see right). Other close friendships signalled in St Mary's memorial windows include George Guest (p. 14) and Olivia Talbot. Olivia was a near-neighbour of the Ringer's in London. She was one of the very wealthy Talbot family of Glamorgan, after whom Port Talbot is named. Finally, Sydney's uncle Samuel Browne (p10) dedicated two windows.

A millpond (now drained) associated with Ringer's watermill lies farther up Anserdale Lane towards Camomile Farm. Tragically, two local children drowned there in May 1900; they were Ernest and Annie-Elizabeth Parker, aged 4 and 2. An inquest established that Ringer bore no blame; he sponsored a collection for their family. On the centenary of the children's death a plaque to commemorate the tragedy was raised on the initiative of Richard Leigh Perkins, the then resident of Ringer's mill. A service of remembrance is conducted there each year.



The first Chancel window to the left of the altar at St Mary's was dedicated by Olivia Talbot (like the Ringer's, her Christian name is misspelled in the window).

The face of the girl is clearly based on the photograph of Annie preserved in the Vestry (see p. 4); that image must have been sent to Ulisse De Matteis's studio in Florence. The glassmaker otherwise drew heavily on his previous designs for the five windows round the altar.

¹ Sir Charles William Strickland (1819–1909) was the eldest son of Sir George, once the MP for the West Riding. From 1549, the family seat was at Boynton Hall, by the 1890s described as 'a large, old mansion of red brick in the Queen Anne style'. Sir Charles was also Lord of the Manor of Howsham, near Aldby Park, the Darleys' family seat.

Ringer in London: clinician, teacher and academic

Ringer graduated MB in 1860. He practised medicine at UCH, employed as ‘House Physician, Resident Medical Officer (1861), Assistant Physician (1863) and a full Physician (1866) and finally Consulting Physician (on his retirement in 1900)’. From 1865 to 1869 he was also Assistant Physician at the Children’s Hospital, Great Ormond Street; his work, notably within various editions of his *Handbook of Pharmacology*, often refers to his own cases and details the childhood diseases he treated there.

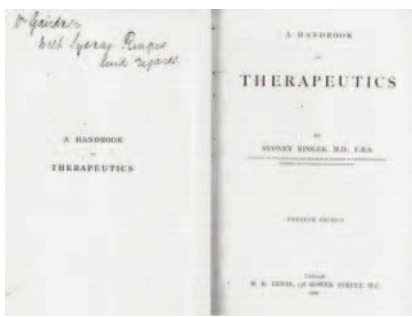
Despite his other virtues as a teacher, Ringer was always nervous when lecturing. However, his clinical training skills were of the very best. One of his former students described what he had learned:

“... first and foremost to be open-eyed and open-minded; then to be honest. He never confirmed his diagnosis by an avoidance of the post mortem room. On the contrary, he there sought confirmation of its correctness or conviction of its error ... but he never juggled with facts, never consciously strove to make things fit; facts were precious things to him.”

At UCL, aged just 26, Ringer became Professor of Materia Medica (1862–1878), then of the Principles & Practice of Medicine (1878–87) and finally Holme^m Professor of Clinical Medicine (1877–1900), succeeding predecessors such as Sir William Jennerⁿ. He was elected Fellow of the Royal College of Physicians (1870) and Fellow of the Royal Society (1885), was an honorary member of the New York Medical Society and corresponding member of the Paris Academy of Medicine.

Ringer’s *Handbook of Therapeutics* became internationally famed, a classic reference text with 13 editions from 1869 to 1897, the last co-authored with Harrington Sainsbury. Moore (1911) notes of the *Handbook* that ‘*from its originality of treatment [it] denoted a scientific aspect of mind towards medicine somewhat rare at that time*’. He used his own clinical reports and often tested agents on himself. He devoted a chapter to cannabis (11th Edition, 1886),

recording that it was ‘*excellent for preventing migraine attacks, especially when used chronically rather than during attacks*’



Frontispiece of Ringer’s *Handbook of therapeutics* (1888, 12th Edn.) from Glasgow University Library, dedicated by him to ‘Dr Gairdner’ (Sir William Tennant Gairdner FRS, 1824–1907, Regius Professor of Medicine, Glasgow)

^mThe name ‘Holme’ appears, entirely coincidentally, elsewhere as that of the co-founder of the Holme Ringer Company in Nagasaki.

ⁿSir William Jenner (1815–1898), renowned pathologist and physician to Queen Victoria, Prince Albert and the Prince of Wales, was famous for his studies of typhus and typhoid fevers.

Ringer's academic research work

'Classical medicine was his profession whereas scientific research was his recreation'

Ringer was one of the early truly scientific clinical investigators, but he also maintained a small research laboratory in the Department of Physiology at UCL (there was no Pharmacology Department there then). He was well known for his fanatical use of every spare moment there: he even climbed the hospital railings one evening when the main door was locked. After his morning rounds, he visited the lab, discussed the experiments with his assistant (Mr Page or Mr Fielder), examined the experimental traces and then departed for Cavendish Place and his private consulting work. His research (described earlier) in formulating 'Ringer's solution' as the archetypal physiological saline, involved several collaborators. From 1875 to 1897, he published more than 30 papers describing the effects of inorganic salts on living tissues, as well as authoring many pharmacological studies.

Other aspects of Ringer's clinical practice

The *Times* obituary (October 1910) notes that Ringer was *'for many years the confidential medical advisor to the late Prince Edward of Saxe-Weimar'*^o, just one of his wealthy private patients. He also helped found an early convalescence hospital, *All Saints'* in Eastbourne. Escaping the conditions of polluted Victorian cities was gaining credibility as a clinical recourse. *All Saints'* was the vision of Harriet Brownlow Byron who had founded a religious community within the Church of England that provided the main nursing support at UCH, even though using nuns as nurses was a practice frowned upon by Florence Nightingale, no less.

Ringer and acupuncture

Whilst Ringer's work on saline, the heart and calcium is still acknowledged, less well known is that he helped to introduce acupuncture to the Western World. 'Needling', as he would have known it, may have reached him through family contacts with the Far East or from a brief stay in Paris (in 1860) where acupuncture was already known. He helped to give acupuncture a medical credibility reinforced by the advocacy of his friend William (later Sir William) Osler^p, whom Ringer had taught the technique. Once back in Canada, Osler first tried his new 'needling' skills to treat the lumbago of his boss, Dr Redpath, but was unsuccessful. He had used ordinary hat-pins, "generating an uncharacteristic stream of oaths from his patient".

^o Prince William Augustus Edward of Saxe-Weimar (1823-1902) was a British military officer of German ancestry; his aunt Adelaide was King William IV's wife. He was a Colonel in the Grenadier Guards (1855) and then a General (1879), receiving many battle honours in the Crimean War.

^p Sir William Osler (1849–1919), the famous Canadian medical practitioner who eventually became the Regius Professor of Medicine at Oxford, is often called the 'Father of Internal Medicine'. Osler had first visited Europe between 1872 and 1874, spending much of that time at UCL where he first befriended Ringer.

Ringer and clinical experimentation on children

Some writers have accused Ringer of conducting unethical experiments on children. In 1907, a Dr Albert Leffingwell wrote a booklet, called *Illustration of Human Vivisection*, where he claimed that '*decades of experiments had been conducted on human beings in charity wards and on children in orphan asylums*'. As is common in such cases, Leffingwell's presentation was deceitful. Whilst it is true that much of clinical practice at Ringer's time would not meet the ethical standards of the 21st century, and certainly not the current legalistic paperwork, we must also not ignore that 'best practice' was very different 140 years ago.

The proper test is whether Ringer worked to the highest ethical standards of his day; he certainly did. He was reporting carefully conducted clinical 'trials' whilst alleviating clinical problems; he always worked with his clinical science 'brain' switched on. Unusually for his time, he kept detailed notes on all his clinical interventions and then reported them for the general good. Leffingwell and others have unscrupulously misrepresented these valuable reports.

Cocoa controversy

Ringer was more properly criticised when, with others, he endorsed Van Houten's Cocoa, the international market leader. This involved a legal case in Paris amidst claims that cocoa was dangerous. Ringer recruited fellow clinicians to support statements such as; '*I am satisfied that Van Houten's Cocoa is in no way injurious to health*' used in advertisements worldwide. This brought the condemnation of the Royal College of Physicians and the Royal Society, bodies which guard their reputations jealously. In May 1893, Fellows were notified of how – and how not – to comport themselves in the commercial world:

'The attention of the President and Council of the Royal Society has been called to certain advertisements ... containing ... statements signed by Fellows of the Society. These ... are not in all cases confined to ... simple matters of fact, but occasionally include expressions of opinion ... and laudatory passages which assume much of the character of an advertiser's encomium. The President and Council fully recognise the liberty of the Fellows to give ... authoritative statements on chemical analysis or any other scientific facts ... They feel, nevertheless ... due regard has hardly been paid to the status and dignity of the Royal Society ... They are, however, confident that ... all the Fellows will ... express any statements [such] that no suspicion of mercenary motives or commercial partisanship can possibly attach to them.'

Ringer must have felt himself suitably chastised.

Sydney Ringer – the man

Despite several reports of Ringer having Quaker origins, his family is not recorded amongst the Norfolk Quakers. Both his father and brother Frederick are buried at a non-conformist burial ground, not the Quaker cemetery. In his adult life, Sydney had a long and intimate association with the Established Church of England.

The *British Medical Journal* obituary (1910) records:

Ringer was brought up in a severe, almost puritanical, atmosphere of Nonconformity, which ... he loved to look back upon. This atmosphere clung about him to the end; true, during his married life, he was drawn [to the] High Church, but ... he did not change really so much as he seemed to. In later years he reverted somewhat, and the spiritual side of Quakerism drew him a good deal.

Schäfer's obituary comments '*Although holding decided views on social and religious questions, he never allowed them to be obtrusive.*'

As to Ringer's personality, on the one hand several sources mention his dynamism and energy; on the other he seems to have had little social life. Many contemporaries describe his reserved and unobtrusive manner; a former clinical student wrote:

Further, he taught us by example to be strenuous; his life was full to the brim with energy ... [with] a great simplicity; he hated display of all kinds and all affectations.

He was famed for his punctuality. Sir John Bradford, who had collaborated with him, commented that he had:

... many curious tricks of manner and was shy and nervous; thus he often repeated three times some simple sentence such as 'Good morning'. He always walked to the hospital, always wore a silk hat and carried a big umbrella. He was difficult to talk to as he had no small talk, and was very reserved and never went out in society ...

He was transparently honest in all professional relations, both in hospital and private practice ... His amusements were music and farming; the latter he carried out on scientific lines in his Yorkshire home, much to the amusement of the stolid dalesmen ... He was a great cigarette smoker and taught Osler the habit.

The family were frequent concert-goers. Harold Batty Shaw noted '[Ringer's] own sitting room in his house physician days was mainly occupied by hutches for his experimental rabbits and a piano'. Ringer often visited the art galleries of London.

Sir Victor Horsley, another eminent former pupil, provides this charming comment and quote:

Sydney Ringer – the man



The wooden stethoscope owned by Ringer's pupil and successor at UCH, Harold Batty Shaw FRCP, and quite possibly used by Ringer himself (*as shown to the author by the late Dr Anthony Batty Shaw of Norwich*).

Ringer had a courtly eighteenth century air and preferred the old wooden stethoscope to the binaural type. A large experience had taught him to be cautious and he would say, 'You young men like to be right; we old men don't like to be wrong.'

Ringer's last publication appeared in the same year his wife died, underlining the devastating affect her death had upon a previously prolific and energetic author. He became even more reclusive. He resigned his positions at UCL and UCH just 3 years later in 1900. Though not obvious to those who didn't know him well, by 1910 Ringer's health had begun to fail. He died on Friday 14 October after suffering two strokes within a few days, as certified by Dr T Walsh Tetley^q Mabel Glover,

a nurse from UCH, was present. Near the end, Ringer greatly enjoyed visits from former students including Harold Batty Shaw and Sir John Rose Bradford^r. He had been planning to live with his daughter, Hilda, and her young family in Oxfordshire. As it was, he died in his own Lastingham home with his daughter, son-in-law and close friends around him. He was buried in St Mary's churchyard 4 days later, in the same grave as his wife, and next to that of their daughter Annie.

Ringer's obituaries reveal the fame and respect he enjoyed. However, several noted that, even by the time of his death^s, his personal fame had undeservedly begun to wane whilst his fundamental insights had become built into the foundations of physiology. Some discoverers' names remain celebrated, but others fall into obscurity; a quirk of the 'sociology' of science and medicine. Thus, Louis Pasteur, Alexander Fleming or even Christian Barnard are names known by many

^q Dr Thomas Walsh Tetley MRCS had Joseph Foord's open-water races (mentioned earlier) to Kirkbymoorside, Beadlam and other villages replaced by piped systems (1907). One of Kirkbymoorside's best-known characters, Tetley was a stickler for the water quality. He pioneered home nursing by trained volunteers, founding one of the first units in England. He introduced inoculation against childhood diseases to the district, and is said to have delivered 4,000 babies.

^r Sir John Rose Bradford (1863-1935) MD FRS, later became President of the Royal College of Physicians. He succeeded Ringer into the UCL professorships of Materia Medica and then Medicine.

^s An address by Sir James Barr (1849-1938), given just weeks before Ringer died, and published in the British Medical Journal provides an excellent example. Ringer read the article and, on 26 September 1910, in one of the last letters he was to write, thanked Sir James for citing his work in such generous terms.

Sydney Ringer – the man



non-specialists, whilst few can name the inventors of the contraceptive pill or genetic fingerprinting^t. Ringer's name does persist thanks to his eponymous solution.

Ringer's second daughter, Hilda Sydney Ringer (1873-1914)

Ringer was survived by his daughter, Hilda. She married Charles Edward Kayler (1863-1934) in 1902 at *All Souls*, Marylebone, with her uncle Bertram officiating. Charles' surname was Pugh until he inherited the estate of Thomas Kayler in 1900 and, as a condition, took that name. The couple later moved to Mixbury House, Oxfordshire and had four children. In 1912, Hilda endowed the Sydney Ringer Lecture given biennially at UCH. Amongst many distinguished lecturers have been the Nobel Prize winners Sir Peter Medawar and Sir Bernard Katz. Hilda died at Mixbury in 1914. Her daughter Helen, as Mrs Helen Bruce, visited Lastingham in the early 1980s; she described herself then as 'the last surviving relative of Sydney Ringer'. Helen's only child, Michael, died in 2006 but he is survived by his four daughters and a son; they are thus Ringer's great-great grandchildren.



The Ringer family graves: *Top*, Annie Ringer's grave is distinguished by the large cross, Sydney and Ann's gravestone lies beside it. The two graves are bounded by a slightly raised, black metal rail (photo courtesy of Neil Davidson, Lastingham). *Above*, the location of the graves as viewed from near the South Porch of *St Mary's*, Lastingham.

^t Professor Carl Djerassi and Professor Sir Alec Jeffries, respectively.

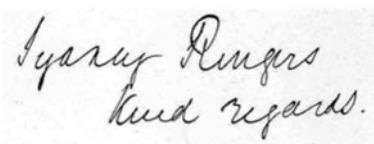
Sydney Ringer's legacy

Professor Moore comments in his biographical paper:

At the active period of his scientific work he was a most prolific writer, yet all his work, so far as he was responsible, has stood the test of time and grown in beauty in men's eyes with the lapse of the years.

Although these remarks were made in 1910, upon Ringer's death, they hold true in respect of the value still placed on his work today, over a century later.

Sydney Ringer left £55,000 in his will, worth perhaps £5 million today. Much of this wealth reflects his earnings as an eminent London physician and successful textbook writer. He may well have inherited significantly from his wife, and also from his brothers, both of whom had predeceased him. Amongst other beneficiaries of his will, his faithful servant Mary Holliday was granted the free use for her lifetime of the Lastingham cottage then occupied by her mother. However, his abiding legacy to the world has incalculable value. It is the simple salt solution that bears his name, 'Ringer's Solution', given to biomedical science and medicine 'to the benefit of all mankind'.

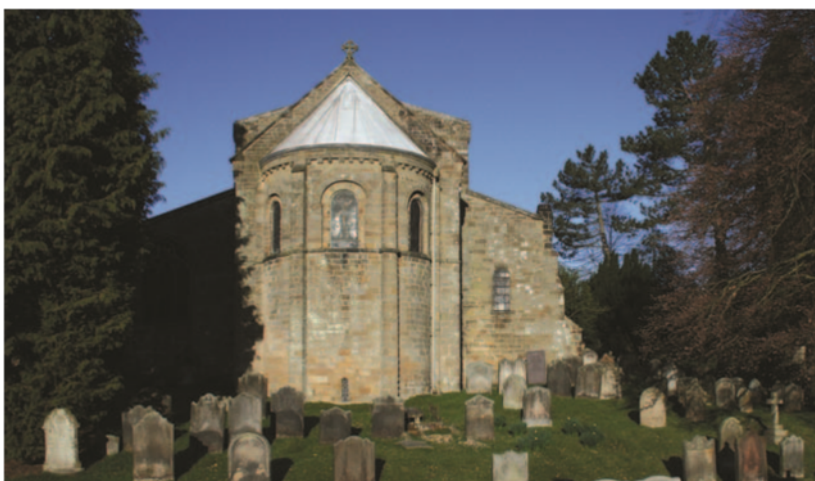


Sydney Ringer
Kind regards.

I accept responsibility for the opinions expressed here and for any errors and omissions.

I would be delighted to hear from readers who may have corrections or further information to offer since a more comprehensive biography is currently being written

(David.Miller@glasgow.ac.uk).



Top, St Mary's newly restored, as seen in about 1880–1890 in a photo taken by Ann Ringer (one of three registered by her in 1893 at Stationer's Hall and now held at the National Archives, Kew). The rightmost figure pointing up at the church may well be Sydney Ringer. *Above*, St Mary's as seen in April 2007 and taken from a similar perspective. Several individual gravestones are clearly recognisable in both images, but tree growth has been considerable in Lastingham in the intervening century, largely blocking the original view Ann Ringer recorded. However, this view has changed again since 2007.

Acknowledgements

Some of the main publications consulted in writing this booklet are listed below. The UK Census (1841–1901) and Birth, Death & Marriage records have also proved especially helpful. It is a pleasure to acknowledge the many people who gave invaluable information or advice. They include:

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K Takemoto (Representative Director, Holme Ringer & Co. Ltd. Fukuoka-ke), Lisa Inoue (Artist, Tokyo).

Others

The children of Michael Holden Bruce, Professor Clive Orchard (Bristol University), Anne Ringer (Melbourne, Australia), Members of the Historical & Archives Committee of The Physiological Society.

The photographs in the booklet were taken by the author, unless acknowledged otherwise.

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