

Our Provisional Committee of Founders

"to take into consideration the propriety of forming a society for the promotion of microscopical investigation and improvement of the microscope as a scientific instrument"



This was the subject for discussion amongst the seventeen microscopists who met at Edwin Quekett's house No 50 Wellclose Square, in the Borough of Stepney, East London on 3rd September 1839. It was resolved that such a society be formed and a provisional committee be appointed to carry this resolution into effect.

The appointed provisional committee of seven were to be responsible for the formation of our society, they held meetings at their homes and drew up a set of rules. They adopted the name 'Microscopical Society of London' and arranged a public meeting on the 20th December 1839 at the rooms of the Horticultural Society, 21 Regent Street. Where a President, Treasurer and Secretary were elected, the provisional committee also selected the size of 3 x 1 inch as a standard for glass slides.

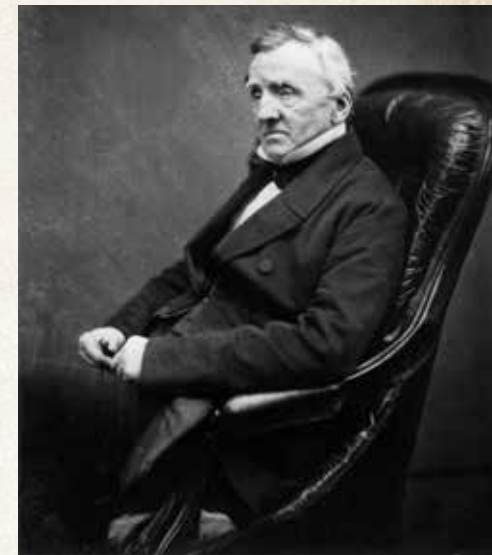
Each of the members of the provisional committee had their own background which we have briefly described on the following pages, as you will see they are a diverse range of professionals.



Wellclose Square

Nathaniel Bagshaw Ward 1791 – 1868

Born at Plaistow, Essex to a medical practitioner. As a youngster he developed an interest in Botany, by 1830 he was living at Wellclose Square and practising as a surgeon. About this time he discovered that plants could grow from seed in



Nathaniel Bagshaw Ward © National Portrait Gallery, London

almost airtight containers. Together with George Loddiges, he saw the potential benefit of protection from sea air damage allowing the transport of plants between continents. This Ward published in 1834 and eventually his cases enabled the introduction of the tea plant to Assam from China and rubber plants to Malaysia from South America.

His glass plant cases allowed the growth of orchids and ferns in the Victorian home and in 1842 he wrote a book on the subject. However glass was subject to a tax making cases expensive so Ward lobbied successfully for its repeal in 1845.

Evening microscopy meetings were held at his home and he is credited with the idea of forming a society due to the popularity of these evenings.

Our first Treasurer, he served the society for many years and in 1866 was one of the three members to apply for the Royal Charter of Incorporation. He was Master of the Society of Apothecaries when they held a Scientific Conversazione at their hall in 1855 devoted to the wonders of the microscope. A report in the Illustrated London News stated there were 600 attendees with over 100 microscopes to view. In addition he was Fellow of the Royal Society and the Linnean Society.

James Scott Bowerbank 1797 – 1877

Born at Sun Street in Bishopsgate, London he was educated by Dr Kelly of Finsbury Square. As a teenager he joined his father's distillery but found time to develop interests in Astronomy, Botany, Chemistry, Entomology, Geology, Anatomy and Physiology. He lectured on Botany from 1822-24

In the late 1820's he commissioned William Tulley to supply a microscope similar to J.J. Lister's. At this time he was living at Park St, Islington and started his Monday night meetings for the weekly investigation of microscopic objects.



James Scott Bowerbank © National Portrait Gallery, London

His paper on 'Reminiscences of the early times of the Achromatic Microscope' read to the society in May 1870 recalls how he and George Loddiges evaluated newly available objectives from Ross and Powell and also how the progress of optics required improvements to the stability and mechanics of the microscope stand.

He lectured on Human Osteology in 1831. In 1833 he wrote his paper on 'The Structure of Scales on the Wings of Lepidopterous Insects', for the Entomological Magazine.

A member of the London Clay Club which was to become the Palaeontological Society (He was Honorary Secretary for 10 years and President at the time of his death) he wrote a book on the 'Fossil Fruits of the London Clay' published 1850.

A Fellow of the Geological Society in 1838 he was to write papers on organic remains and siliceous bodies found in chalk. The Rev Reade called Dr Bowerbank the father of the Microscopical Society and quoted his exclamation 'God Bless the Microscope: let us have a society'. He accompanied Ward and Reade in the application for the Royal Charter.

Following his work on the provisional committee he became a member of the first council. He read papers to the society on fossils and geology and became President in 1846. The 1840's saw his interest turn towards sponges which resulted in his monograph of the British Spongiadae, which was published by the Royal Society in 1857.

He was a member of the Zoological Society serving for many years on its council. National collections were swelled by thousands of fruits and seeds, and hundreds of fossils and sponges from his collection. He died at St Leonards on Sea, Sussex.

Edwin Quekett 1808-1847

Born at Langport in Somerset, younger brother of William the distinguished curate and older brother to John the histologist; their father was headmaster at the local grammar school.

Quekett (of whom we've been unable to find a portrait) was a brilliant medical student at University College where he was awarded two gold and one silver medal. By 1839 when he hosted our foundation meeting in his drawing room at 50 Wellclose Square, he was surgeon to Tower Hamlets Dispensary.

From 1835 Quekett was lecturing in Botany at the London Hospital Medical School, where John who



Quekettia papillosa

was apprenticed to Edwin was to be awarded a Studentship in 1840. Quekett became Fellow of the Linnean Society in 1836.



Quekett's microscope as shown on the cover of the catalogue of the society's collection

He died aged 38 at his home in Wellclose Square. His microscope was bequeathed to the society, it is shown prominently on the dustcover of Gerard Turners catalogue of the society's collection. This body tube was engraved by order of the council in December 1847 with the following tribute 'to whom the society was also indebted for many valuable communications published in its transactions. He died June 28th 1847. Regretted by all who knew him.'

A Brazilian orchid was named after him, genus Quekettia.

George Loddiges 1786-1846

The youngest of six children born to a German immigrant nurseryman who settled in Hackney. Of his siblings only two were to survive into adulthood. Nothing is known of George's early years or education, but his father who died in 1826 must have been an educated man. His first seed catalogue of 1777 used the Latin names of plants as well as the German and English names. Also employing older brother William the family business was to become the most famous nursery garden in Europe.



George Loddiges © Hackney Museum

Loddiges married on the same day as his brother but there were no children. He was a talented artist and provided the majority of the drawings for the *Botanical Cabinet*, published in 20 volumes from 1817-1833 with over 1300 colour plates illustrating exotic plants from their nursery.

The business was in the vanguard of heating glasshouses, Loddiges went on to develop a sprinkler system to produce the humid conditions required by tropical plants. He was awarded a Gold Medal by the Horticultural Society in 1817 for the humidification system. When Loddiges had his new house built at the nursery in 1820 it was sited adjacent to a Stove House and connected to the steam heating system.

Loddiges was elected to the Horticultural Society in 1820 and would be a council member of that society for 25 years. Using 'Wardian Cases' he exported plants to Australia a four month voyage and together they grew 30 species of ferns in 'miniature cases'.

From J S Bowerbanks reminiscences we know that Loddiges acquired one of Tulleys microscopes and 'from that time forward we worked together in concert. Every new improvement in combinations by Lister, Russ

and Powell, were examined carefully and critically by us,'

A D Michael's presidential address of 1895 cited George Loddiges as 'one of the most liberal patrons and most skilful users of early achromatic objectives'. After his service with the provisional committee Loddiges became a member of the first council.

In addition to his Botany, Horticulture and Microscopy, George Loddiges was an expert Taxidermist, and member of the Zoological Society of London. He built up an exceptional collection of hummingbirds and had one named after him, in 1830. Some of his collection of over 200 species eventually went to the British Museum of Natural History at Tring.

Joseph Jackson Lister 1786-1869

Born in London to Quaker parents he left school at 14 to join his father in the wine trade. According to his son he had an early interest in optics and was 'in many respects a self-taught man'. He married in 1818 and had seven children.

In 1824 he computed his first microscope objective (focal length 9/10 inch) and commissioned William Tulley to make it. Encouraged by its performance he went on to experiment using lens components from various manufacturers in combination. Eventually he was able to publish his understanding of the principles of the achromatic microscope. Read to the Royal Society in January 1830 'On the improvement of Compound Microscopes'. In addition he greatly improved the design and construction of the instrument. William Tulley's pamphlet for his microscope of 1826 states 'the construction of the instrument and its apparatus was made from original drawings by my friend J.J. Lister Esq'.

In 1827 he used the Tulley microscope with Dr Thomas Hodgkin of Guys Hospital to ascertain the structure of red blood corpuscles in mammalian blood.



Joseph Jackson Lister

Lister also reorganised the need to record the image produced by the microscope and adopted Wollastons camera lucida to the eyepiece. This was included in Tulley's microscope outfit and Lister produced many

sketches of microscope subjects over the years. After the death of William Tulley in 1835 he was to work with Andrew Ross - 1/8 inch objective design and James Smith - 1/4 inch objective design.

His son James born 1827 was to become Lord Lister the famous surgeon. On his father's death he provided an obituary running to ten pages for our transactions of 1870. When Lord Lister died in 1912, his father's papers, experimental lenses and some tools were left to the society. This legacy was described and discussed at length in a scholarly article by Dr Brian Bracegirdle in our proceedings of 1987 Vol 22 Part 5 pps 273-297. Lister died at Upton House, Essex in his 84th year.

Richard Horsman Solly 1778-1858

Apart from the obituary note in our transactions for 1859, little is known of this gentlemen whose interest was plant physiology. A member of the Royal Society and the Linnean Society he served for several years on our council.



Richard Horsman Solly © National Portrait Gallery, London

In the death of Richard Horsman Solly, M.A., F.R.S., the scientific societies of the metropolis sustained a general loss. He was not known for his original researches or scientific contributions, but he devoted his time and his independent means to science. He watched with

interest the development of microscopic observations and assisted to the utmost of his power those who were engaged in the original investigations. He was one of the founders of this Society, and a constant attendant at its early meetings

Transactions of the Microscopical Society of London
NS Vol VII 1859, p73

Joseph Bancroft Reade 1801-1870

Born in Leeds to an Anglican family he was educated at Leeds Grammar School and Cambridge University. Ordained in 1825 he was to become a pioneer in photography and photomicrography as well as an astronomer. As he is the subject of an accompanying article by one of his descendants these words are confined to his contributions to microscopy.

The late 1830's saw him at Peckham School House using a solar microscope with which he made enlarged photomicrographs. These were used by the skilled artist W L Aldous to produce the well known lithograph of the head of a flea. In a similar way Reade produced the initial images for Professor Owen's work 'Odontography'. The newly available achromatic objectives were prone to decementing in the concentrated sunlight of the solar microscope, so Reade devised a condenser lens system which separated the infra-red part of the spectrum from the visible. This utilised a hemispherical element, to which he subsequently applied a tin foil patch stop to produce 'blackground illumination'.

In 1861 Reade describes the use of the same hemisphere with a 'table microscope' newly presented by former parishioners and friends. On this occasion he made two cuts in the tin foil stop at right angles to each other. Mounting the hemisphere in a rotatable sleeve he used the system to illuminate a diatom with rectangular structure. This condenser became known as Reade's Kettledrum, we have two examples in the RMS collection (Turner No 354).



Joseph Bancroft Reade © National Portrait Gallery, London

In 1869 he became the 15th President of the society. His presidential address was given in February 1870. During this he mentioned that he was responsible for the word microscopical instead of microscopic as initially suggested for the title of the society.

Reade went on to announce the gift from his own library of his run of Philosophical Transactions (of the Royal Society). A complete run from 1665-1870 with both author and subject indexes, a most generous gift.

The Journal for July 1869 contained his description of his latest innovation which he called the Diatom Prism. Another sub stage illuminator, it was an equilateral prism of glass, suggested to have 1 1/2 inch length and 1 inch faces. He recommended it to be held in an inclinable cradle on a clampable ball and socket joint. There is an example in the RMS collection (Turner No 353). August's Journal contained a postscript paper on the Diatom Prism in use. This was to be the last paper he read to the society because he was ill. He died on the 12th December at Bishopsbourne near Canterbury where he had been Rector since 1863. However he had sent a final paper entitled 'Note on Fluorescence and Pseudo-dichroism' from Bishopsbourne Rectory on 7th November 1870.

The Society would like to thank Chris Kennedy for all his hard work putting this article together.

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