

### *Short Articles*

opened in Parliamentary Road, near the Royal Infirmary, in 1814. His portrait by Sir Henry Raeburn now hangs in Gartnavel Hospital.

The students in Glasgow seem to have participated only to a limited extent in resurrectionist activities. Nevertheless, under the bold leadership of Mr. Granville Sharp Pattison (1791–1851), a lecturer on anatomy and surgery in the Andersonian School, they drew lots in secret to rob graves in the surrounding churchyards, usually the Ramshorn Kirk nearby. Matters came to a climax when they robbed the grave of a well-known merchant's wife, a Mrs. McAlister. An enraged mob attacked the university in High Street, and parts of the body were discovered. Pattison and three students were brought to trial before the High Court at Edinburgh in 1814. They were acquitted, but feelings ran so high in the city that Pattison was forced to go to America, where he eventually became an eminent surgeon and professor of anatomy.

The Royal Infirmary had an unusual origin in that it was initiated not by medical men but by the Professor of Logic at the University, George Jardine (1742–1827), who was also its first secretary. The original list of subscribers still exists. By this time the Glasgow Medical School proper was firmly established, largely through the efforts of William Cullen and his pupil, Joseph Black, before both went to Edinburgh.

A point of interest regarding the present hospital building is the small obelisk in the car park facing Cathedral Square. It marks the site of the Bishop's Palace and the ancient Castle of Glasgow. During the War of Independence, this was the last English stronghold in the area, defended by Sir Henry Percy, 1st baron of Alwick (1272?–1315). Sir William Wallace (1274?–1305) with three hundred cavalry, at the battle on High Street known as the Bell o' the Brae, overthrew the garrison of over a thousand men and sank his huge sword in Percy's head – not the last severe head injury to occur on the doorstep of the Glasgow Royal Infirmary, which has now the busiest casualty department in the United Kingdom!

#### THE NINETY-FIFTH ORDINARY MEETING

This meeting was held in the Royal Beatson Memorial Hospital, Glasgow, on 19 April 1980, when papers were presented by Drs. R. H. Nuttall and John Paul. Dr. Nuttall's paper was entitled:

#### THE EARLY SCOTTISH MICROSCOPES

Scottish microscope manufacturers and microscopists have taken an important part in the development and application of the instrument, particularly in the nineteenth century. Opticians such as Alexander Adie of Edinburgh were then making instruments comparable with those made in London, while medical men such as John Hughes Bennett (1812–1875) and John Goodsir (1814–1867) were in the forefront of medical microscopical research. In applied microscopy Henry Witham's work on geological microscopy was a vital initial step in the development of petrology. It is appropriate, therefore, that the Royal Scottish Museum in Edinburgh should have a representative collection of microscopes which well illustrates the development of the instrument.

In the seventeenth century microscope manufacture in Britain was confined to the

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London instrument trade; their products included the early tripod and Marshall microscopes made of leather and wood; though in the eighteenth century the principal material of construction was brass. In Scotland John Finlayson was probably the first maker of microscopes (1743), and his compound microscopes were followed by a unique group of brass or silver simple microscopes made by John Clark. His development of the simple microscope was important, for this instrument offered significant optical advantages over the compound microscope which led to its use for research. Early in the nineteenth century simple microscopes were being used by men such as William Sharpey (1802–1880) and Robert Brown (1773–1858); while in Edinburgh Alexander Adie, an instrument-maker working under the instruction of Sir David Brewster (1781–1868), was making simple microscopes fitted with jewel lenses. Adie was also the maker of a reflecting microscope – a design representing an attempt to improve the optical performance of the uncorrected compound microscope.

A breakthrough came with the introduction of achromatic microscope objectives in the years 1825–1850, and Alexander Adie was one of the first of the provincial opticians to sell instruments of this type, which had been initially developed in London and Paris. Some of Adie's instruments copied the designs developed in Paris, though in addition many such microscopes were imported, particularly for medical use. Scottish microscopists also used instruments made by the London opticians. Notable examples of surviving London-made microscopes from this period are the Ross stand used by Balfour which is in the Royal Scottish Museum, and that made by Smith and Beck for Joseph Lister, now in Glasgow's Hunterian Museum.

This last instrument, made in 1842, clearly illustrates the progress made in instrument design in the previous few years: for it has a curved Lister limb, substage condenser, and numerous accessories, as well as greatly improved optics. It is possible to assess the performance of the newly introduced achromatic objectives of this period by the measurement of their Optical Transfer Function. This procedure, which compares the contrast inherent in a test target with that in the image formed by the optics, shows that objectives of moderate apertures, such as were used by Lister for his early researches, have an optical performance nearly equal to that of modern objectives of equivalent aperture. Such data serve to demonstrate the significance of the optical improvement achieved in the early nineteenth century, and further emphasize that instruments preserved in museums are important for our understanding of the development of science and medicine.

Dr. Paul spoke on:

#### SIR GEORGE BEATSON AND THE ROYAL BEATSON MEMORIAL HOSPITAL

George Thomas Beatson (1848–1933) took his first medical degree in Edinburgh. Shortly after that he spent some time on an estate in the west of Scotland, where he started work on an M.D. thesis on the subject of lactation. Some of the experience and information he acquired suggested to him that there was a non-nervous connexion between the ovaries and the mammae. This experience in the late 1870s was to influence his thinking during the next quarter of a century.