Microscopes

5 September 1989

Four stamps featuring subjects as seen through a microscope will be issued on 5 September to mark the 150th anniversary of the Royal Microscopical Society, founded in 1839 as the Microscopical Society of London.

The 19p stamp (inland first class and EEC basic rate) features a 10-times enlargement of a Snowflake; the 27p stamp (airmail postcards) features a 5-times enlargement of a Blue Fly; the 32p value (airmail Zone B) shows blood cells at an enlargement of 500 times and the 35p denomination (airmail Zone C) a microchip, shown at 600-times enlargement.

The use of the microscope took hold of the public imagination in 1665 when Robert Hooke (1635-1703) published his Micrographia which illustrated tiny creatures (whose existence no one had suspected) at enlarged size. Hooke’s superb drawings revealed a complex world – people were amazed at the illustrations of the flea and louse and of the blue fly as shown on the 27p stamp. The microscope revealed that cork contains patterns of tiny holes which Hooke called cells – the term now used to describe the basic units of life of which all living things consist; Hooke’s “cells” were the empty spaces where living cells had been.

Microscopy made relatively little advance for a century after Hooke’s Micrographia, mostly as a consequence of the poor quality of lenses available. Whilst microscopes became popular with amateurs who wanted to see for themselves the “little animals”, the more serious scientists re-

mained somewhat sceptical of the instrument. In 1830 Joseph Jackson Lister (1786-1869, father of the surgeon Lord Lister) perfected the achromatic objective, a lens without the defects that bedevilled earlier lenses. As a result the microscope became accepted in scientific circles. The 32p stamp shows blood cells as revealed through a microscope of 1839 when Lister and others formed the Microscopical Society of London. The Society set about standardising the size of the glass slide on which specimens are fixed for observation and determined some of the dimensions of the instrument. In 1866 the Society was granted the prefix Royal and adopted as its emblem the Snowflake as shown on the 19p stamp.

By the end of the Victorian age the development of photography had aided microscopists, instruments could be produced which allowed
for magnification of about 1,000 times. In 1931 the electron microscope was invented in Germany, this permitted magnification of 1 million times. The scanning electron microscope, developed in Britain in 1951, provides for views of whole objects or surfaces rather than the slices that had previously been used. The 35p stamp shows such a view of a microchip.

Microscopes are today vital in industry; metals, plastics and ceramics may fail if faults are contained in their internal structures — such faults can be detected by microscopes. Lasers are being applied to microscopes to extend their capabilities. The Scanning tunnelling microscope uses a new principle to achieve magnifications of 100 million times and picture individual atoms.

Royal Mail Stamp Cards
Royal Mail Stamp Cards (formerly referred to as PHQ cards) featuring each of the four stamps will be available from 21 August, price 16p each. They are numbered 120A-D.

Presentation Pack
The presentation pack (No 201) will cost £1.35 and was designed by Keith Bassford with text by Neil Ardley. It was printed by Litho-Tech colour printers. The illustrations include early and modern microscopes.

First Day Cover
The first day cover will be available from 21 August, price 17p, from the British Philatelic Bureau, philatelic counters, the National Postal Museum and main post offices. Two pictorial postmarks will be used for the first day cover service, one for the Bureau (microscope eyepiece), the other for Oxford (microscope slide).

A first day cover service will be provided by the Bureau with the official Royal Mail cover addressed to the destination required with the four stamps cancelled with either postmark — charges £1.62 UK (including VAT), £1.41 overseas (no VAT). Application forms, available from the Bureau and main post offices, should be returned not later than 5 September.

Customers requiring only the special pictorial postmarks may obtain them under the reposting facility by sending on the day of issue a stamped addressed envelope under an outer cover endorsed “Special First Day of Issue Handstamp” to:

British Philatelic Bureau
20 Brandon Street
EDINBURGH EH3 5TT

Oxford
Special Postmark Duty
Customer Services Mails Branch
Oxford LDO
Becket Street
OXFORD OX1 1PR

First Day Posting Boxes will be provided at most main post offices for those collectors who wish to post covers to receive the standard, non-pictorial “First Day of Issue” handstamps. In addition pictorial First Day handstamps are available at the London Chief Office (arms of the City of London) and Durham (Cathedral). Covers for reposting should be sent to: Special
Mrs J Robinson
200 Manorbier Road
ILKESTON
Derbyshire
DE7 4AB

The first person to use a microscope was Leeuwenhoek. He used it to observe water fleas and bacteria, and his work laid the foundation for the field of microbiology. However, it wasn't until the invention of the compound microscope that scientists could observe and study microscopic organisms in detail. The compound microscope, with its objective and eyepiece lenses, allowed for magnification of samples up to 2000 times, enabling the study of cells and other small structures.

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Postmark Duty, City of London LDO, King Edward Street, LONDON EC1A 1AA and Pictorial First Day of Issue Postmark Duty, 33 Silver Street, DURHAM DH1 3RE.

A number of special handstamps, sponsored by stamp dealers and others, will be used on 5 September – full details of these will be found in the *British Postmark Bulletin*.

**Thury’s five-body microscope (Science Museum)**

**Souvenir Cover**

A souvenir cover, of similar design to the first day cover, will be available from philatelic counters from 6 September, price 17p. This can be used to obtain relevant Microscope postmarks after the first day of issue and will be on sale for one year.

**1990 Special Issues**

The subjects for the 1990 programme were announced in the February *Bulletin*. The proposed dates of issue are as follows:

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Collectors should note that these dates are provisional, any changes will be notified in the *Bulletin*. The “special definitives” for the 150th anniversary of Penny Post will be issued on 9 January.

**Posting Boxes**

No.102. Shown here is a George VI lamp box at Glenfinnan in Scotland, near to the famous monument erected to commemorate the rising of the clans in support of Prince Charles Edward Stuart (Bonnie Prince Charlie) for the 1745 Rebellion. The monument featured on the 14p stamp in the National Trusts set of June 1981 (SG 1155) and the Prince was shown on the Scottish aerojoume marking the centenary of the National Portrait Gallery of Scotland issued on 4 April 1989 (see April *Bulletin*, page 207).

The illustration was sent in by Angus Mathieson of Bedfordshire who commented “I think it is interesting because The Post Office has left a G.R. post box at the very spot where it was hoped to displace a previous George from the throne ...”.

This particular type of lamp box was introduced in 1935 and continued to be manufactured until 1949 when a revised design was introduced. Many are to be found today in rural areas.

**Cylinder News**

The 14p definitive has recently been printed from cylinder 11 (phosphor 41), the 19p from cylinder 3, the 28p from cylinder 4 and the 1p sideways roll (code SC) from cylinder R39. The £1 Castle stamp has been printed from plate 1E.