# **Peter Evennett interview**

In the first of a series of infocus interviews looking into the careers of eminent figures from across the field of microscopy, we are delighted and privileged to speak to one of the RMS's most respected and long-standing members, Dr Peter Evennett, Hon FRMS.

During a career spanning several decades, Peter has earned a stellar reputation as a scientist, teacher and champion of microscopy. A towering presence on RMS courses and outreach events for decades, and a tireless advocate for science and microscopy, Peter has inspired generations of students and colleagues alike.

With characteristic modesty, Peter genuinely wonders why anyone should want to make him the subject of a magazine feature. From an RMS perspective, it is hard to think of anyone with a longer or more significant association with the Society, so perhaps the pertinent question is why it has taken so long - and we are only too pleased he has agreed to take part!

Since it usually makes sense to start at the beginning, we kick things off by asking him how his love of microscopy first came about...

"A lot of present-day microscopists would probably say something like, they were given a little microscope when they were a child and that's what started them off", says Peter. "Well, none of that is true of me.

"Like most people who have done A-Level biology, I did use one at school, but I'm certain that I didn't use it properly and I'm sure the teacher didn't either! Nobody was particularly interested in microscopy when I was at school."

In the mid-1950s, Peter studied zoology as an undergraduate at Liverpool University. While this subject inevitably required an element of microscopy, his use and understanding of the instruments at this stage of his education remained fairly rudimentary. The true 'lightbulb moment' was to come a few years later, when Peter moved up to St Andrews to study for his PhD in histology.

"This really started to change my experience of microscopy", explains Peter. "The lab had several microscopes, including one I adopted for use - a Cooke Troughton and Simms M2000 - and somewhere around the lab I found a big glass bell jar and fiddled around with it.

"But I still wasn't doing anything particularly clever with microscopy until one day – which would have been in the late 1950s – I went to a different lab in the main part of the department in the centre of St Andrews. There was a professor there who had | move for Peter, because he has lived and worked

a microscope and he showed me three things that I had never seen before, and which really made an impression on me. One of these was an inverted microscope, the next was Lampbrush chromosomes, and the third was phase contrast microscopy. Once I'd seen these things, let's just say that was it."

#### **Trial and error**

"I began to take photographs with the microscope, and in those days there weren't any courses like we have now in the RMS", says Peter. "We were selftaught and we learned to do things by experimenting and finding things out. What I have often said is that we learned to do it by finding our own way and for young people now, the conditions in which we learned microscopy no longer exist. The equipment is no good for learning on; it is set up for using rather than learning."

As far as microscopy was concerned, Peter and his colleagues continued to plough this auto-didactic furrow until his professor at St Andrews moved down to Leeds University, taking Peter and his other students with him. Though he may not have realised it at the time, this was a hugely significant



Peter (second left) with (left to right): Dr Nick Wrigley, Exec Hon Sec for Education; Professor John Garret, Former RMS President; and Mr Clive Cowen, Hon FRMS,

in the Yorkshire city ever since (that is, until a very recent move to Derbyshire, of which more below).

"When we got to the department here, there was very little equipment or proper microscopes. Well, I suppose it was because the professor recognised I had an interest, that he asked me to do the job of ordering a lot of equipment. This was the early I 960s when there were some good times financially and money was available – so he asked me to help with producing a list of kit.

"I ordered microscopes – Zeiss, Wild, Cooke Troughton & Simms – several from each of those firms, and I managed to have them in my room, so all of a sudden I had a lot of nice kit to work with – and to help others with, when they wanted use of the microscopes.

"After a few years the professor got another pool of money and we got an electron microscope – and that was obviously the sort of thing I would be interested in playing with. I took on responsibility for making it work, and teaching others in the department about how to use it. Then we got a transmission electron microscope, a scanning electron microscope, another TEM, and also various light microscopes."

Peter was by now an accomplished microscopist, but it wasn't until he attended a scientific meeting in the Netherlands that he fully began to view microscopy as an important area of scientific study in and of itself.

"We stayed in Scheveningen and the meeting was in The Hague", Peter recalls. "I saw for perhaps the first time, that microscopy was much more than simply a tool. Listening to some of those speakers, I began to realise that this was truly something to be interested in. I think it would also have been around this time that I became aware of the RMS and joined the Society."

#### Peter the teacher

The records show Peter joined the RMS in 1966, which places him among the longest-serving

members of the Society. He received his Honorary Fellowship in 1998, and most recently, in 2020, the President's Medal for his tireless commitment to microscopy education, dissemination and inspiration across Europe. That latter award reflects the fact that within the RMS, as well as the wider science community, Peter is best known as a teacher of microscopy.

He taught on the RMS Light Microscopy Summer Courses for several decades, firstly at Brunel University in the 1970s, and then at Oxford, before taking it to Leeds and then following it when the course moved to York. He was also a key tutor on the Light Microscopy PhD Courses at Copenhagen University and at Dresden for more than 20 years. He has taught right across the continent, inspiring hundreds, if not thousands of students over the years. However, as his colleagues have often testified, Peter's students have not been the sole beneficiaries; his innovative and engaging teaching style, coupled with his use of practical demonstrations, have frequently been cited as an inspiration by colleagues who have gone on to teach others.

Peter says: "With teaching, the first and most important thing is to teach myself how to do something before I can teach others. I remember attending an RMS meeting at Imperial College London, and one of the people speaking there was Professor Helmut Haselmann from Tübingen in Germany. He was talking about teaching microscopy and I liked what he was saying so much that I contrived our family holiday that summer to pass through Tübingen, and I went to visit his lab. There I saw all sorts of nice things – microscopes and various bits of kit that he had modified and made for the purposes of teaching microscopy. Coming back home I replicated and developed a number of those things.

"I wangled myself into teaching on the RMS LM course, and that is where I really learned a number of things about teaching microscopy. I had always had an interest in making bits of equipment, so naturally, I liked the idea of building simple bits of apparatus for demonstrating microscopy. I had a lathe and a milling machine to make modest little bits and pieces – metal parts for demonstrating this and that.

"One of my favourite ones was a ping-pong ball 'eyeball' with a half-inch hole and a suitable lens attached so that you could see the image on the 'retina'. I did that demonstration as part of my teaching for several decades, and whenever I got to that bit, taking out this ping-pong ball and popping it on top of the eye-piece of the microscope, that is the sort of thing that makes an impression – and it got me interested in taking this sort of approach on RMS courses."

#### A microscope for every school

Peter has volunteered his time and expertise at countless RMS Outreach events. Regular attendees at the Microscience Microscopy Congress (mmc) will know him as a friendly face and fount of knowledge at the RMS Learning Zone, and elsewhere he has brought microscopy to people of all ages at exhibitions, science fairs and other public events.

One particularly memorable piece of RMS outreach work was set in motion when Peter attended an exhibition for teachers held by the Association for Science Education - an organisation of which his wife Katherine was a member. For a while, Peter had been on the look-out for a simple, user-friendly microscope which the RMS could recommend for schools, and the Motik MS2 model on display at one of the exhibition stands seemed just the ticket.

Peter says: "I came back and explained that I had seen the sort of microscope we wanted. It was a one-eyed stereomicroscope – which is a bit of a contradiction in terms – with low magnification and didn't require slides or any such things to prepare. You stuck something underneath and had a look, and that was the one we adopted as the microscope that we were going to help the teachers with. We developed a scheme by which teachers would get  $\pounds 20$  towards the purchases."

This became known as the 'Microscope For Every School' initiative, which was accompanied by the production of a magazine, setting out some simple activities schoolchildren could do with a microscope. Peter helped to produce this alongside RMS colleagues Chris Hammond and Juliet Dyson, and he was also involved in the production of an educational video, in which pupils at a fictional school used microscopes to look for evidence following a break-in.



### Editor of the Proceedings of the RMS

For 19 years between the late 1970s and 1990s Peter served as Editor of the Society's former publication for members, *The Proceedings of the RMS*. Much like today's in**focus** Magazine, the *Proceedings* contained a diverse range of microscopy articles, meeting reports, information and insights from contributors within the RMS Membership and wider microscopy community. Peter initially featured as the 'Hints and Tips' editor, coming up with technical ideas and pointers for readers in each issue. But when the editor Tony Robards decided to step down, Peter "somehow inherited" the job, as he puts it.

This was many years before the advent of anything resembling today's publishing and production processes. And unlike the quarterly in**focus**, the *Proceedings* consisted of six issues per year – quite an undertaking by anyone's standards.

"Stuff used to come in as piles and bits of paper", recalls Peter. "Some of it had to be retyped, and I used to take it all along to a type-setting place in Leeds, and they would work through all this paperwork and turn it into nice, typed text which we made up the pages from. They produced long lengths of paper with the text on, and then put it through a machine – a sort of mangle. When the pages were ready I would pick these up and send them to the RMS."

Inevitably, meeting production deadlines for the 'Proceedings' and other RMS publications was sometimes a fraught business, and Peter remembers a particularly close call when finalising the allimportant exhibition catalogue for the RMS 150<sup>th</sup> Anniversary celebrations.



RMS Special issue stamps 1989.

"I had to go through the proofs of that while I was on holiday in Norway, so I arranged for Allison [Winton, current RMS Chief Executive who was then in charge of advertising for the Proceedings] to call on the Norwegian house phone so I could pass on the corrections. Anyway, it worked!"

The six-month microscopy exhibition at the London Science Museum was one of several activities which took place throughout 1989 to mark the Society's 150<sup>th</sup> anniversary. Among these, as many long-standing RMS members may recall, was the commissioning of a special set of RMS postage stamps – an idea which popped into Peter's head one morning when he was shaving.

"I always find that all sorts of odd things come into your head when you're shaving", reveals Peter. "At the time, one of my daughters had a book of commemorative stamps celebrating the anniversary of the Cyclists' Touring Club, so I thought – well, why can't we have one for the RMS?

"So I went to work that day, and instead of doing any proper work, I tried to find out how you actually go about getting a special issue of stamps. There isn't exactly a form you can pick up from the Post Office, so I made a lot of phone calls and spoke to lots of people from the Royal Mail – eventually finding the right chap."

After a fair amount of convincing and cajoling, the resulting set comprised four different stamps, each bearing an iconic image encapsulating the impact of microscopy over time. The microchip, red blood cells, the snowflake and Robert Hooke's famous fly engraving all made the cut – but the Hooke image also caused something of a fly in the ointment, so to speak.

"The fly was originally supposed to be on the 19p stamp", explains Peter, "but the Post Office swapped it with the snowflake, because, as they put it, 'old ladies' wouldn't like licking the back of a stamp with a fly on it!"

A further RMS coup that year came in the form



Peter Evennett on Blue Peter.

of an appearance on children's TV show Blue Peter, broadcast live on BBC One. Peter joined presenter Caron Keating in the studio, where a selection of microscopes had been assembled for the show's young viewers.

"We had a number of light microscopes, but I thought it would be rather nice if we had an electron microscope too", says Peter. "So I phoned up Dick Paden who worked for CamScan, and I think I said something like: 'I'm not sure whether I'm asking you for a favour or offering you an opportunity'. I said it would be a heck of a job to install an electron microscope in the TV studio – but if you get yourself on the telly then maybe it's worth it!" Luckily Dick agreed, and it was.

## Recent and ongoing RMS involvement

Although now retired, Peter has continued to be involved with the RMS in recent years. As well as his continued presence at mmc and other meetings, he has been instrumental, alongside long-time colleague Chris Hammond, in sourcing and maintaining microscopes for use in schools, as part of the RMS Microscope Activity Kits (MAK) scheme. He and Chris refurbish second-hand microscopes which are sold at amateur microscopy meetings, with all funds going to the MAK Fund. Peter is also a member of the RMS Outreach and Education committee, as well as the RMS History Committee.

At this very moment in time, however, Peter's chief preoccupation is settling into a new home in Derbyshire – and, specifically, unpacking and reassembling a rather large amount of microscopical equipment.

"As anyone who has moved house will know, you end up surrounded by boxes and you've know idea where anything is. And because I have all these microscopes and other bits of kit, it's even more difficult. For the past little while I have been sorting out all my stuff here and it is going to take a long time before I get my microscopes back working again - although I only use them for fun these days, to look at a few slides."

We certainly hope Peter is back up and running soon, and wish both him and Katherine all the best in their new surroundings.

**Owen Morton**