

DR MARY BRÜCK (1925-2008)

It is with great regret that we report the death of astronomer and eminent historian of astronomy Dr Mary Brück (Figure 1) on 11 December 2008 at the age of eighty-three after a short illness. Dr Brück will be no stranger to readers of this journal, as a member of its Editorial Board since its founding and a regular contributor.



Figure 1: Dr Máire (Mary) Teresa Brück (1925-2008).

Máire Teresa Brück née Conway (she often used the Anglicised form of her first name outside Ireland) was born on 29 May 1925 in Ballivor, Co. Meath in the Irish Republic. She was the daughter of Thomas and Margaret Conway, the oldest of their eight children. She attended St Louis Convent in Monaghan and sat her Leaving Certificate examination at the age of sixteen. A talented and determined pupil she showed an early aptitude for mathematics and the physical sciences. She was also musically gifted, becoming an accomplished pianist who could tackle Liszt and Chopin, though her younger brothers preferred her renditions of ragtime.

After school she attended University College Dublin where she studied physics. She later remarked that the physics syllabus at this time was almost entirely classical, with no mention of relativity or quantum mechanics and only a brief treatment of radioactivity.

From Dublin she moved across the Irish Sea to the University of Edinburgh, where normal academic life was resuming after the war. Here she pursued doctoral research in solar physics under Dr M.A. Ellison. This work resulted in the thesis *Studies of Ha Line Profiles in Prominences*, for which a Ph.D. was awarded in 1950. Her first professional publications appeared during this time, two contributions to *The Observatory* reporting solar flares. Her doctoral work was later published in the *Monthly Notices of the Royal Astronomical Society*. Following the award of her doctorate she returned to Dublin, taking up an appointment at the Dunsink Observatory (Figures 2 and 3), then, as now, part of the Dublin Institute for Advanced Studies, where she continued her solar work. While at Dunsink, Mary Conway, as she then was, met her future husband, Professor Hermann Alexander Brück, then Director of the Observatory. They married in 1951 and she acquired an instant family as Professor Brück was a widower and had two children from his first marriage.

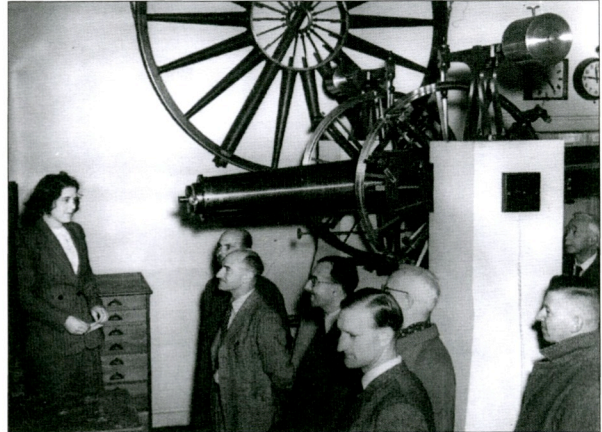


Figure 2: Mary Conway demonstrating equipment at the Dunsink Observatory to members of the Royal Astronomical Society during their meeting in Dublin in 1950.

While at Dunsink Mary Brück made her first foray into popular astronomy, broadcasting a series of radio programmes for children, *The Sun, Moon and Stars*, on Radio Éireann (now Radio Telefís Éireann) in the mid-1950s. These broadcasts were the first popular astronomy programmes in Ireland and found a receptive audience. In the early 1960s she broadcast a second series on the then-new topic of *Spaceflight*.

In 1957 Professor Brück was appointed Astronomer Royal for Scotland, Regius Professor of Astronomy at the University of Edinburgh and Director of the Royal Observatory Edinburgh (ROE), posts which he held until his retirement in 1975. His family relocated to Scotland with him, moving into the purpose-built residence for the Astronomer Royal in the grounds of the ROE on Blackford Hill in Edinburgh. They were the last Director's family to live 'on the hill'; subsequent to Professor Brück's retirement all of the residential accommodation was converted into offices.



Figure 3: In 1954 the Dunsink Observatory mounted an expedition to observe the 30 June total solar eclipse from Öland in Sweden. Mary Brück is captured here preparing for the eclipse. On the day, heavy clouds prevented observations from being made.



Figure 4: A meteor shower over a country town. One of the illustrations in *The Night Sky* (1965), Mary Brück's introductory astronomy book for younger children.

Although she now had three children of her own as well as two step-children Mary Brück continued to pursue an academic career. In 1962 she was appointed a part-time Lecturer at the University of Edinburgh, later becoming full-time and retiring as a Senior Lecturer in 1984. From 1984 to 1987 she was a Fellow of the University and more recently an Honorary Fellow. As a lecturer she taught generations of students and was well-loved for the care she showed her charges. Her first book, however, was aimed at a younger audience. In 1965 she published *The Night Sky* in the popular Ladybird series for young children (see Figure 4). This charming book introduced the constellations and various types of astronomical objects, from meteors and comets to galaxies.



Figure 5: Professor Hermann Brück (left), Mary Brück and Professor Malcolm Longair on the occasion of Professor Brück's 80th Birthday in 1985. At the time Professor Longair was the Astronomer Royal of Scotland.

During this period she switched from solar to stellar research, pursuing a programme of three-colour photometry, initially largely of southern galactic clusters. Later she concentrated on the Magellanic Clouds, in the 1970s utilising the then-new UK Schmidt Telescope (UKST) on Siding Spring Mountain in New South Wales and the COSMOS fast microdensitometer in Edinburgh. She became an expert on the Nebulae and was an invited speaker at IAU Symposium 108 on "Structure and Evolution of the Magellanic Clouds" in 1983.

Her teaching and research interests coalesced in the Edinburgh astronomy teaching packages, first released in 1984. These packs contained a series of practical exercises for undergraduates. They were used in conjunction with professional-quality film reproductions of UKST photographs and allowed students to use the techniques of professional astronomers with professional material but without requiring specialised measuring machines. A later development of this approach was the book *Exercises in Practical Astronomy using Photographs* (1990). Here the measurements were made on photographs reproduced in the book without requiring separate films.



Figure 6: The opening of the extension to the Crawford Room at the ROE in 1988. Professor Brück and Mary Brück are first and second from the right, respectively.

Following his retirement in 1975 Professor Brück (Figure 5) took up the study of history of astronomy, largely, though not exclusively, working on the earlier history of the institution he had directed. Initially Mary Brück collaborated in this work, but she was to become an eminent and respected historian of astronomy in her own right. The collaboration led to *The Peripatetic Astronomer* (1988), the definitive biography of Piazzi Smyth, the second Astronomer Royal for Scotland. In later years, Professor Brück's health declined and Mary Brück looked after him through his final years until his death in 2000.

Mary Brück's own particular interest was women in astronomy and much of her work subsequent to *The Peripatetic Astronomer* was in this area. However, she also maintained her interest in the history of the ROE and its magnificent Crawford Collection of historic astronomical texts (see Figure 6). In 2002 she published *Agnes Mary Clerke and the Rise of Astrophysics*, a masterly piece of work which is likely to

remain the definitive study of this subject. When Miss Clerke's *Popular History of Astronomy During the Nineteenth Century* was republished in 2003 it was natural that Mary Brück should provide the Foreword. Her final book, *Stars and Satellites*, is to be published posthumously later in 2009. Each of its chapters contains biographical essays on various women astronomers. It will stand as her last word on the subject.

Mary Brück never lost sight of her Irish roots, writing two chapters for *Stars, Shells and Bluebells* (1997) published under the auspices of the Irish WITS (Women In Technology and Science) initiative and celebrating the achievements of early women pioneers in science in that country. Its forthcoming companion volume, *Lab Coats and Lace*, to which she also contributed, is dedicated to her memory. She also contributed to the *Irish Astronomical Journal* until it ceased publication.



Figure 7: Mary Brück (left) receiving the Lorimer Medal from Lorna McCalman (the then-President of the Edinburgh Astronomical Society) and Dr David Gavine in 2001 for her efforts to popularise astronomy.

She wrote entries for the *Oxford Dictionary of National Biography* and published numerous papers and book reviews, not least in this journal. When the newly-formed Society for the History of Astronomy (SHA) launched its journal, *The Antiquarian Astronomer* (AA), she contributed what became the first paper in the inaugural issue. Later she would join the SHA and become a member of the AA's Editorial Board. In recent years she has also returned to solar work, collaborating with Jay Pasachoff and his colleagues. She was instrumental in setting up the ROE History Project to document the recent past of that institution.

Mary Brück was a Fellow of the Royal Astronomical Society and an Honorary Member of the Irish Astronomical Society. In 2001 she was awarded the Lorimer Medal by the Astronomical Society of Edinburgh for her work in popularising astronomy (Figure 7) and was made an Honorary Member of that Society. The ROE held a short workshop in her honour on the occasion of her 80th birthday in 2005 (Figure 8).

She remained active until shortly before the end, regularly attending meetings and giving talks. In 2002, despite being almost immobile following a hip operation, she was determined to honour an invitation as the Guest Speaker at the Scottish Astronomy Weekend in Dundee and gave an acclaimed talk on "Spectra of the Stars". As recently as May 2008 she gave a well-received public lecture to the RAS in London on "The Fascination of the Heavens", which was about pioneering women astronomers. In addition to the book *Stars and Satellites*, she also has a paper in press in the AA. Co-authored by David Gavine, it documents the Reverend Hector MacPherson, a populariser of astronomy in early twentieth-century Edinburgh.



Figure 8: Mary Brück at the ROE in May 2005 for the Workshop celebrating her 80th Birthday. With her are her brother, Loman Conway and his son, Turlough Conway.

In her youth, Mary Brück imbibed the deep Catholic faith of her parents, and it sustained and underpinned her throughout her life. Always modest and self-effacing, she maintained that being a wife and mother was much more difficult than her academic work. She was unfailingly generous and helpful to her colleagues, and generations of students have benefited from her advice and assistance. She is survived by her children, Anne, Catherine and Andrew, and her stepchildren, Mary and Peter.

Clive Davenhall