Sir Patrick Moore, ‘The Sky at Night’ and modern astronomy in the UK

Paul Abel, Chris Lintott and Martin Barstow remember Patrick Moore and the part he played in shaping today’s vibrant astronomical community.

All of the astronomical community was saddened to hear the news of the death of Patrick Moore on 9 December 2012, at the age of 89. Patrick was always the first to demur from any professional status in astronomy, describing himself as a broadcaster or, first and foremost, a writer. Yet he has probably had the largest influence of any individual on astronomy research in the UK, through the generations he inspired. Many of his obituaries recorded his life and his broadcasting contributions, but few, if any, considered how his presence has shaped modern astronomical research in the UK. For A&G we felt it appropriate to remember Patrick’s life in this context, from our perspective as astronomical colleagues, presenters and participants in The Sky at Night.

There will be few astronomers active for whom The Sky at Night has not been ever-present in their professional careers – indeed, for most of us it has been a constant throughout our lives. From its first broadcast in April 1957 until January 2013, Patrick presented every programme except one, when he suffered a bout of food poisoning from a duck egg. His record for the longest presenter of any one show is unlikely to be beaten. Patrick’s exciting presentation, enormous passion for astronomy and uncanny ability to present complicated astronomical ideas in terms of simple everyday things, made him an instant hit with viewers. There was no one like him on the television, with his manic sense of energy and near-encyclopedic knowledge of astronomy. Even in black and white, Patrick shone brightly on the screen, urging people to get their binoculars, telescopes or whatever they had to hand and take part in astronomy. This important message, that astronomy was accessible and open to everyone, has stimulated many generations of scientists.

When The Sky at Night was born, in April 1957, Patrick was already a prominent member of the British Astronomical Association. His own research came early in life, as an observer well known for his lunar and planetary observations. His excellent drawings of the planets and carefully crafted charts of obscure lunar features near the limb were all meticulously recorded in dozens of logbooks. This scientific narrative was frequently interrupted with complaints about cloud, eyepieces being dropped and trees obscuring his views of Saturn.

Visual observers

In those pre-space-age days, much effort was spent mapping the libration areas and visual observers made rapid strides. Patrick often claimed discovery of what is now Mare Orientale; the claim is somewhat dubious (a German observer, Fritz, recorded it in 1906; for details see Baum and Whitaker 2007 JBA 117 129) but there is no doubt that he was an accomplished observer, famously submitting maps to assist the space agencies in lunar exploration. Prior to the launch of The Sky at Night Patrick had been accompanying Hugh Percy Wilkins to the Meudon refractor in Paris, to look for small craters on the lunar surface. He spent hundreds of hours behind the eyepiece of his own telescopes and those of large observatories around the world. This observing experience gave him both the authority and the confidence to speak on the subject he lived for. Patrick had made an impression since Johnstone asked him to present the argument against. Later on, Johnstone was invited by the BBC to make a controversial, but very popular topic in the 1950s: flying saucers. Obscure photographs and reported contacts with uncannily human-looking aliens from Venus, Mars, Jupiter – anywhere but here – had been the subjects of books and television in the US and UK. The BBC decided to get in on the act, and produce a TV debate. Finding believers to talk about their experiences and recent vacations to the Moon was not difficult, but finding a voice of rationality, reasonable yet likeable, had proved a challenge. Fortunately the producer of this programme, Paul Johnstone, had just the man in mind. Notorious for his lack of faith in “all forms of flying crockery” Patrick presented the argument against. If the argument was right it would mean there was no need for the programme, if it was wrong, the producer could claim there were no believers.

When The Sky at Night launched there was a monthly programme, initially to be called Star Map, to present astronomy to the public. Clearly Patrick had made an impression on Johnstone, he asked him to present the programme, Paul Johnstone, had just the man in mind. Notorious for his lack of faith in “all forms of flying crockery” Patrick presented the argument against. Later on, Johnstone was invited by the BBC to make a monthly programme, initially to be called Star Map, to present astronomy to the public. Clearly Patrick had made an impression since Johnstone asked him to present the argument against.

It is interesting to note that The Sky at Night was not Patrick’s first foray into television. In fact his first television broadcast had been concerned with

Patrick Moore, photographed for his presidency of the BAA 1982–1984. (C BAA 1985)
to be the presenter and he went along to Lime Grove studios – now long demolished – to record the first episode. The programme was to run for a few months to see how it went. The formula established, a simple mix of professional and amateur astronomy aimed at a general audience, is still used today, more than 55 years later.

In many ways, both Patrick and The Sky at Night came along at the right time. The space age was just beginning and the exploration of space, both manned and robotic, promised much and delivered more; Patrick was there to report it. In October 1959, Russian probe Lunik 3 became the first spacecraft to send images from the far side of the Moon and, at Lime Grove, Patrick presented these images for the first time: images he had always wanted to see. The first manned missions followed within a few years, developing into the race to the Moon and culminating in the Apollo missions.

With his extensive knowledge, Patrick assisted NASA in finding suitable landing sites and was a mainstay of BBC coverage. When Neil Armstrong returned from the Moon, Patrick made sure he got a Sky at Night interview with him: further inspiration for budding astronomers.

In the 1960s robotic exploration of the solar system began with flybys of Venus and Mars. Patrick and the other BAA amateur astronomers had already recorded the waxing and waning of the martian polar caps, not to mention the faint and elusive markings of Venus. There was wild speculation about what secrets these worlds might hold. Spacecraft swinging by Venus soon established that it was the closest place to hell yet found. Similarly, Mars, once thought to be a harsher Earth, turned out to be cold and apparently sterile. Dark markings thought to be vegetation were little more than darker deserts and arid plains; Lowell’s canals had finally gone. Patrick summed up these findings in the 1969 Sky at Night programme “A Year in Space”, all the time urging that there was still much work for the amateur to do. The spacecraft had dispelled a few myths, but the new questions they had posed meant the future of amateur astronomy was more assured than ever.

Voyager

Patrick and The Sky at Night continued to report on the seminal developments in astronomy through the 1970s and 80s. A rare alignment of the outer planets of the solar system gave the opportunity of visiting them all for the first time, with a single mission, Voyager. Little was known about the conditions in the outer solar system and there was great concern about the threats to the Voyager spacecraft, in particular from the radiation belts around Jupiter.

To investigate further, Pioneer 10 and 11 were launched as pathfinders, with the programme featuring the first close-up pictures of Jupiter. The Voyager spacecraft transformed our view of the outer solar system, revealing the planets and their moons as bizarre and alien places. Patrick hopped back and forth between the US and the UK to report on the discovery of volcanoes on Io, and the impenetrable atmosphere of Titan. Each time the Voyagers encountered a new world, Patrick was there at JPL in Pasadena to report the discoveries. Into the 1990s, Patrick followed as the fleets of Mars probes. Magellan, Galileo and Cassini reached distant worlds.

UK missions

It was not only the exciting images and discoveries from the spectacular NASA planetary missions which Patrick brought to his audience, but more “home grown” discoveries with space astronomy missions, covering new wavebands in the X-ray, ultraviolet and infrared. UK-led missions such as Ariel 5 and international collaborations including IUE and IRAS featured extensively. A particular feature of Patrick’s approach was to involve expert guests from these missions as well as a plethora of other scientists. Harlow Shapley, the first astronomer to make an estimate of the size of the Milky Way, was one of his early guests. Sir Bernard Lovell, Dame Jocelyn Bell Burnell, Anthony Hewish, Samuel Tolansky and Stephen Hawking, among others, later joined him. Patrick was ever the masterful interviewer, and skilfully steered proceedings so the layman could understand what professional scientists were doing and why the results mattered.

Appearing on the programme has also been a great experience for the scientists, drawing them into the large “family” of programme participants. Patrick’s home, Farthings, on the Selsey coast, became a haven for astronomers, amateur and professional. Patrick was always the perfect host and a visitor could be certain of three things: fascinating conversation, a good curry and a first-class hangover in the morning! Plenty of astronomers are familiar with that most dreaded of all phrases from their host: “One for the road”.

Patrick’s path into the profession, avoiding university until a host of honorary degrees came his way, was that of an amateur. However, professional astronomy didn’t entirely agree with him. The respect he received from his professional colleagues at the IAU and elsewhere came from his firm grounding in the science of the subject. He was a member of the International Astronomical Union for many years, was recognized by the Royal Astronomical Society with a special millennium award and its education prize is named in his honour. He was eventually elected an honorary fellow of the Royal Society, at around the same time as he received his knighthood, which was one of the few events that left the arch-communicator utterly speechless, at least for a few seconds.

Patrick’s popularization of our subject meant he was known internationally as well as at home, but he also worked within the IAU. He served for years on the solar system nomenclature committee, and edited the general assembly’s newspaper in Argentina in 1991. That editorship marked what might well have been the greatest journalistic feat of Patrick’s career: the final edition of the paper reported – with photos – on a fire in the conference venue, which had completely prevented access. Fleet Street would have been proud! No such drama marked the general assembly in Manchester in 2000, when Patrick served as assistant editor to his protégé, John Mason.

Historian of astronomy

Patrick also had a role as a historian of astronomy, and his survey of pre-Voyager Neptune was especially well regarded, but it was his hundred-plus other books as well as his inescapable presence on The Sky at Night that inspired generation upon generation of professional, as well as amateur astronomers. For us, and countless others, he will always be the astronomy communicator, his books and his devotion to astronomy ensuring that we were all savaged by the astronomy bug. He was never aloof and as his fame grew, so did the number of letters he received, many from young astronomers like us wanting to know how best to make a start when expensive telescopes were out of the question. He was a man of his time, but also exactly the right person at the right time. Above all else, he was unique and irreplaceable.

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Paul Abel (University of Leicester and The Sky at Night), Chris Lintott (University of Oxford and The Sky at Night) and Martin Barstow (University of Leicester, RAS Astronomy Secretary).

At the celebration of 55 years of The Sky at Night.