PROFESSOR EDWARD DERBYSHIRE

18th August,1932 – 9th July, 2024

My father, Edward Derbyshire, was born on the 18th of August, 1932, to Kathleen ('Katie') Derbyshire (nee Wall) and Edward Derbyshire, at 10, Canterbury Street, Garston, Liverpool, the son of a domestic worker and dock labourer. In later years, Edward Junior recounted how he would walk on his own to the local Catholic primary school, Holy Trinity, navigating the web of backstreets. It showed a determination that became the hallmark of Edward's life.

Any sense of normality was first interrupted when Edward, aged six, fell ill during a diphtheria outbreak in Liverpool, an issue that was debated in Parliament at the time. Edward spent five months in hospital before being allowed to return home.

After the outbreak of the Second World War, Edward, his elder sister Margaret, and his mother were relocated to North Wales, whilst Edward Senior worked in the aircraft factory established near Speke Hall. Edward told how they would watch the German bombers flying over the mountains of North Wales to drop their munitions on the docks and other industrial sites in Merseyside. 69 out of 144 berths at the docks were put out of action, with nearly 3,000 casualties. The roof of the Anglican cathedral was pierced and stained glass windows damaged during the May 1941 Blitz.

Following the end of the war, Edward's parents made a decision that was to have a major impact on their lives. Edward Senior decided to emigrate to the United States, ahead of the rest of the family, where he was to find work as an engineer, whilst Katie was to move south to Stone in Staffordshire with the children. Edward gained a place at Alleyne's Grammar School in the days when such schools were more effective tools of social mobility. This was another vital piece of the jigsaw in Edward's progress into adult life, as he gained a place at the newly formed University College of North Staffordshire (UCNS; later Keele University) to study English Literature and Geography in his foundation year, before majoring in Geography, with a subsidiary in Geology.

Come 1950, Katie began work in the newly opened 'factory in a garden' at the Wedgwood site at Barlaston, hand painting porcelain plates. Edward Senior had established a new life in Baltimore, Maryland, and the marriage was not to last. Katie was to follow her former husband to the United States a few years later, where she worked her way across the continent to California, becoming a companion to the actor Mary Livingstone, wife of the comedian Jack Benny, amongst others.

Edward as a foundation year student, UCNS, 1950

Deferring his National Service, a decision which Edward wrote 'might not have served me optimally,' he began his studies at UCNS in 1950, driven there by his brother-in-law, and admitting to some nerves about what lay ahead. A resident in the not-so-salubrious quarters of Nissan Horwood Hut 3, with five other male undergraduates, he described being 'both abandoned and as free as a bird'. Soon, Edward was fully immersed in the joys of student life: playing in the first ever 1st XI Soccer match *versus* Birmingham University; founding the men's, and later women's, table tennis teams (earning the nickname 'All Balls'); and helping backstage at a production of 'A Midsummer Night's Dream', where he constructed a bridge over a lake. In 1952, Edward was elected President of the Geographical Association, having the distinction of being the only British undergraduate to attend the XVIIth International Geographical Congress in Washington DC in August 1952, at the age of almost 20.

It was at UCNS that Edward met my mother, Maryon Lloyd, his 'soulmate,' who was also studying Geography with English Literature, and roots were firmly planted in the soil of the North Staffordshire hills. Keele was to remain crucial to the newlywed couple's lives, and that of their three children and one grandchild, and helped to define the next few decades. Not only was this where love had sprung, but it was also a place where many friendships and academic links were made.

Once he had graduated from Keele in the first tranche of finalists in 1954, and after gaining a Diploma in Education (and deciding not to teach young people), Edward resumed his National Service, teaching English and Geography to 'squaddies' before ending up at the 'plum posting' at NATO Headquarters at Fontainebleau, south of Paris, where he was based for 18 months.

Edward teaching 'squaddies', 1955

Released early by the Army, Edward then accepted the offer of a postgraduate scholarship at McGill University in Montreal, Canada, where he planned to continue his studies towards an MSc. Maryon graduated from Keele in 1955 and, before the move to Canada, Edward and Maryon were married on June 2nd, 1956, at St John's Church in Buckhurst Hill, Essex. The couple returned to Canada for the next few years, with Maryon working at the Arctic Institute of North America for a year to help support Edward's unfunded year of thesis writing. Training first as a weatherman with the Canadian Meteorological Service, Edward then spent a year at the meteorological station in Schefferville, near Knob Lake, in central Labrador,

with Maryon, where he recorded a minimum winter temperature of minus 47.5°F. They both recounted the wonders (and terrors) of being surrounded by forest, lakes, snow and, as he recalled, wolves.

Edward and Maryon on their wedding day, 1956

In 1958, the couple returned to UCNS, and Edward became a Demonstrator in Geography, moving with my mother into the now-demolished Gateside Cottage, where they adopted a tortoiseshell farm kitten called 'Oedipus' (a play on words). Their eldest son, Edmund, was born in Stoke General Hospital in January, 1959. Edward's MSc thesis, entitled, 'Fluvial erosion in central Quebec-Labrador,' was completed in May 1959, and awarded by McGill the following year.

Life continued apace as the young family moved in 1960 to Australia, where Edward assumed an appointment in Sydney as a Lecturer at the University of New South Wales, in Newcastle, a post he described as being offered 'under a false premise.' Disappointed by this appointment, Edward 'fell on his feet' in 1962, moved to 44 Evelina Road in Toorak, adopted a Siamese cat called 'Mrs Siddons', subsequently having the pleasure of working as the first full-time lecturer in the Geography Department of Monash University in Melbourne, establishing the subject as a full and integral part of the university offer, and leading the new department in the fields of geomorphology and climatology. His initial research interests included studies of the geomorphology and glaciations of Tasmania and the Antarctic continent. Recalling Edward, one student at the time, Ken Marriott, wrote that, 'Eddie was always very approachable…but he didn't suffer fools lightly,' though he and his fellow undergraduate Howard Brown were nonetheless inspired to be 'turned into geographers.'

Edward and Maryon returned briefly to the UK for a sabbatical, during which their second son, also named Edward, was born, in April 1965 in Hereford General Hospital. Here they learnt that Mrs Siddons, in a final dramatic act, had been squashed by a motorcar. Edward visited Spain at this time, researching the cordilleras in the Meseta of Castille. Returning to Australia, Edward continued to work as a Senior Lecturer at Monash. In 1966, he was invited by the United States Geological Society (work for which he was in 1974 awarded the

Antarctic Service Medal) to contribute to research into the cirque forms and moraines in the dry valley area to the west of the McMurdo Sound, on the southern tip of the Ross Peninsula. Back in Melbourne, Edward continued to work towards his PhD at Monash, whilst collaborating with academics at the 1964-founded Macquarie University in New South Wales, being awarded his doctorate in 1968 for a thesis entitled, 'Glacial Geomorphology and Climate of the Mountains of Western Tasmania, with special reference to the Northwest Centre.'

In the meantime, the family of four had returned to the UK in January 1967, with Edward taking up an appointment as Lecturer until 1970, then Senior Lecturer until 1974, before becoming Reader, in the Department of Geography at his alma mater, now Keele University. This was followed by the birth of the couple's third son, Dominic, at the Newcastle-under-Lyme Maternity Unit, in November 1968.

During the period that followed, Edward continued to lead fieldtrips, notably to Norway and Iceland (once dropping his beloved Leica camera in an Arctic lake). It was in 1970 that Edward was invited by Geoffrey Boulton of the School of Environmental Sciences, University of East Anglia (UEA), to join a six-week expedition to Iceland's small but dynamic ice sheet. Here, and back at Keele, Edward continued to hone his research into glaciology and glacial deposits, and, as he wrote, promote 'the societal relevance of [that] science in solving real-life problems affecting us all.' This mantra was one which was to develop throughout Edward's career and motivate his cooperation with colleagues and institutions worldwide.

A sabbatical year followed in 1975-1976, during which time Edward lectured once again at Monash University, and, for a longer period, Massey University in Palmerston North, New Zealand, whilst continuing his glaciological and earth science research.

Though Edward was based for 18 years at Keele as an established academic, years he described as 'the happiest of my life,' many other opportunities opened up. In 1977, Edward first visited China, one year after the fall of the Gang of Four and Chairman Mao's death, as a member of the UK Royal Society's delegation of geomorphologists. The links first forged with academics at the Chinese Academy of Science (CAS) were to play a seminal role in the later development of Edward's research work and international profile. It was at this time that Edward became fascinated by aeolian soil particles deposited as loess, kickstarting what was later described by Professor Slobodan Markovic as a 'scientific revolution, one which, led by Edward and his eminent Chinese colleague Professor Liu Dongsheng, 'verified Chinese loess as the most important continental record of changes in Quaternary palaeoenvironments.' Visiting at the same time as a delegation from the Australian Academy of Sciences (AAS), Edward also forged a relationship with a leading soil scientist, Professor Jim Bowler, both of them determined to develop an understanding of the loess landscape. An invitation followed to spend six months at the CAS Institute of Glaciology in Lanzhou, Gansu Province, in 1980, offered by the legendary Chinese glaciologist, Professor Shi Yafeng. It was here, at Lanzhou University, that Edward led a three month course for international scientists in glacial geomorphology and sedimentology. This period undoubtedly reshaped Edward's career and

provided impetus for his pioneering scientific research into soils. It was seminal in forming important friendships, too, such as with Professors Wang Jingtai (about whom he later wrote a poem and obituary), Li Jijun and Ding Zhongli, later a Vice Premier of China.

Edward on a field excursion in China, 1980

After Edward's family flew home from China in 1980, he travelled to Islamabad and joined the International Karakoram Project in the upper Hunza Valley in Pakistan. This collaboration with scientists in a politically sensitive and geomorphologically unstable region of the world proved one of Edward's great maxims: that no one should have to surrender their right to an education, with open mindedness being the prime ingredient. In this spirit, Edward grew a much-loved beard, which he kept until his death. Edward's work in the field of soil mechanics, whether at the Kielder Reservoir on the North Tyne River, the Yellow River in China's northwest frontier region, the precipitous valleys of the Karakoram, or the oil-gas platforms in the North Sea, had a bifold focus: debate, collaboration and innovation based upon international cooperation between scientists from across a broad spectrum of disciplines; and real-life solutions for people, often the poorest, whose lives were threatened by huge movements of soil deposits and the Earth's crust. This was work that also brought Edward into the field of Quaternary research into palaeoclimates and the evolution of climate change, areas he early on describes as being of 'huge societal significance.' Indeed, his work in this climatically crucial region of the world – the Tibetan Plateau often being referred to as 'The Third Pole' – allowed Edward to make one of his seminal contributions to geoscience in understanding the extent of the palaeoglacial ice cover over Tibet. This was a busy time for Edward, and as his research interests accumulated, he was honoured to receive the Beck Award of the Royal Geographical Society of London 'for contributions to glacial geomorphology and research in China' in 1982.

In 1985, Edward left Keele University for the last time, a decision he wrote later was 'difficult to understand.' Indeed, he had been awarded his own Chair at Keele in 1984 as Professor of Geomorphology, but had, overall, felt unappreciated. Nonetheless, after taking up the Professorship and leadership of the Geography Department of Leicester University, Edward continued to explore ways forward in research, despite inheriting a department that

had become somewhat ossified. His mission was to modernise the department, an almost Herculean task. Frustratingly, this period also included the loss of the Soil Mechanics Laboratory at Leicester in 1989 when the Department of Civil Engineering was closed. However, Edward had already persuaded the European Union to fund eight years of research into the huge and largely undocumented landslides of western China, for which he later earned the Varnes Medal of the International Consortium on Landslides, awarded to him by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Union of Geological Sciences (IUGS) in 2012. Joint and fruitful research with the Department of Geology at Leicester also allowed for further important scientific analysis of the glacial sediments of the Karakoram, and the loess plateau of Tibet. Research collaboration with Professor Ian Smalley at Leicester and Dr Tom Dijkstra at the University of Loughborough brought further academic papers and European-Chinese collaboration.

The move from Keele also brought the reward of a much-loved townhouse in Brighton, a colourful four-storey bolthole on the southern English riviera filled with a lifetime of memorabilia that was much appreciated by Edward and Maryon. This was followed some years later by a move to a spacious apartment in Hove, and finally, in the late 2000s, to a part of an old mansion house in the somewhat unlikely setting of Bognor Regis.

Back to 1990 it was, of course, typical of Edward to see an opportunity to 'retire' from formal academia, aged just 59, as an opening to further international collaboration and supervision of doctoral students. He mentioned being happy that he 'had the freedom to run my own life; to teach if I wished and/or take on full-time research.' Approached by Professor Jim Rose, the Director of Quaternary Research in the Department of Geography at Royal Holloway, University of London, Edward, as Emeritus Professor, entered into a decade of work he said included 'without doubt the happiest and most rewarding teaching of my life.' It was here that Edward contributed to the MSc in Quaternary Science and supervised and worked with two post-doctoral students who became adoptive members of his personal, and worldwide Quaternary, family, helping with the delivery of a course on sedimentology: Professors Lewis Owen and Meng Xingmin.

Edward (far right, sitting) in Pakistan, 1995

Furthermore, this period of overlap (1987-1991) saw Edward, as the UK's national correspondent, join only 16 scientists involved with the International Geological Correlation Programme (IGCP) 252, a joint venture between UNESCO and IUGS on the 'Past and Future

Evolution of Deserts.' This was combined with Edward's membership of the Royal Geographical Society's Earth Resources Committee, which in turn led to his becoming a member of the External Relations Committee of the Geological Society of London. Busy as ever, this was accompanied by an invitation by IUGS to chair its Committee for Research Directions, a thinktank charged with promoting international geoscience research initiatives.

Elected as the Secretary-General of the International Union for Quaternary Research (INQUA) for 1991-1995 at the annual Congress in Beijing, China, Edward used this opportunity to develop internationally based Quaternary research initiatives with likeminded scientists from across the globe, including in China, Australia, Europe, North America, South America, and India, notably with Professor A.K. Singhvi, whom he encouraged and supported in a mission to establish INQUA within the important Indian subcontinental academic hemisphere. At the Great Hall of the People in Beijing, Edward was able to chat on several occasions to the paramount leader of China, Deng Xiaoping, about climate change and its societal impacts. In 1992, the government of Gansu Province in China made Edward an 'exemplary foreign expert.' The following year, 1993, brought a collaboration with An Zhisheng and A.K. Singhvi, through IGCP 349, on 'Desert Margins and Palaeomonsoons since 135ky: 1993-1997', resulting in a co-editing with A.K.Singhvi of a book entitled, 'Methods for Paleoenvironmental Research in Drylands.' During this part of the 1990s, Edward also found the time to contribute to the IUGS's Commission on Environmental Management as a member of the Medical Geology Working Group. In 1995, he was coopted on to the Scientific Board of the IGCP), prior to being elevated to its Chair for five years (1996-2001), the longest term yet served by an IGCP chairperson. It was also at this time that Edward attended four of UNESCO's biennial General Conferences, working with the UK's Permanent Delegation.

1995 was important for another reason: a spin-off from the main loess project initiated at Leicester was a meeting in Loughborough to discuss loess and other collapsing soils. Support from NATO also enabled other leading scholars to attend, with the outcome being a book edited by Edward, Dijkstra and Smalley, entitled 'Genesis and Properties of Collapsing Soils.' Further research in 1997 brought insights into the correlation between climate and desertification, highlighted by a submission to 'Earth Science.'

The year 1999, when Edward was 67, brought two important turning points in his still developing career. The Loessfest '99 Conference, organised by Edward, Smalley and Professor Ludwig Zöller in Heidelberg and Bonn to commemorate the 175th anniversary of the naming of 'loess,' resulted in further international collaboration, as well as two more edited volumes of research and analysis in 2001: 'Recent research on loess and paleosols, pure and applied'; and 'Loess and Paleosols: characterization, chronology and climate.' The other highlight of Edward's year in 1999 was his appointment as an Honorary Life Member at INQUA, in acknowledgment of his contributions to Quaternary science. Still on the twin-track approach to loess research projects, Edward, Dijkstra and Meng edited 'Landslides in the Thick Loess terrain of Northwest China', the culmination in 2000 of the 'Loess Landslides in Lanzhou' project.

Edward (far right, sitting) at Loessfest '99, 1999

Rather than slow down his academic research interests and international collaborations, Edward's work seemed only to accelerate. In 2001, he was appointed to the Chairmanship of the Science Programme Committee of the proposed United Nations International Year of Planet Earth (IYPE), 2008**.** Such a role, Edward wrote, included 'the range of skills expected being well beyond that of chairing committees; the learning curve in diplomacy and politics is as steep as ever.' Typically, Edward modestly attributed his success in lobbying national delegations at the United Nations (UN) in New York and the Foreign and Commonwealth Office in the UK to declare 2008 the IYPE at the UN General Assembly of December 2005 to his experience advocating the establishment of departmental programmes and student societies during his foundation year at UCNS. Also during this period, 2000-2004, Edward co-led, with Professors Olle Selinus and Peter Bobrowsky, IGCP 454, focussing on medical geology. Journeys to Europe, working with the likes of Professor Ted Nield at the Geological Society, allowed others to collaborate with Edward, 'this most dedicated servant.'

In 2004, Edward was awarded the Prix d'excellence pour les sciences de la Terre, by the Organisation mondiale de mineralogy, Monaco. Continuing to visit colleagues in China and beyond, Edward saw no need to end his first 'retirement.' After his much-touted second 'retirement' in 2010, he continued his work on medical geology, with an emphasis on airborne natural mineral particles. This allowed continued contact with international geoscience institutions, supervision and editing of scientific papers and a chance to act as a series co-editor with Professor Eduardo de Mulder of the legacy volumes that provided state of the art records of the IYPE's ten major themes.

Typically, an investment in the 2000s in a property on the southern coast of Gran Canaria did not simply mean the occasional relaxation by the pool, but rather scientific cooperation with researchers such as Dr Inmaculada Menéndez González at the Instituto Oceanografía y Cambio Global in Las Palmas. This was archetypically Edward: as he stated when at UCNS, 'vacations were generally too long for my taste.' Summer camping holidays with his family around Europe had, indeed, been sold as breaks, but included *in-situ* seminars on the glaciations of the Alps or the Dolomites, or the import of Quaternary soil sections exposed by the roadside. Life was work, and work was life, however varied. Indeed, in a paper harking back to his earlier life in North America, Edward's article 'Notes on the Social Structure of a Canadian Border Town', was published in 'Sociological Review' in 2011.

Still based in Bognor Regis, Edward sustained a dramatic injury in July when hitting his head on an iron girder of the basement of the property, having delved underground to extract academic papers for his continued research. Bleeding on the brain ensued, as did an air ambulance flight to Southampton Hospital to save his life. A miraculous escape, aided by an excellent team of health professionals, allowed Edward to continue to work. In early 2012, Edward effectively compiled, edited and produced the 40th Anniversary volume for IGCP, providing an historical overview of the outstanding contributions of global scientists to the IUGS-UNESCO IUGS legacy. As recognition of his academic work, Edward was subsequently awarded the James M. Harrison Award and Medal for Outstanding Achievement by the IUGS. His citation supported the view of many colleagues throughout the decades, who were inspired and impressed by Edward's commitment, rigour and generosity of spirit, as one who 'exemplifies the voluntary service to the Union most cherished and appreciated by its members.'

In his eightieth year, 2012, Edward was headlined at an international conference in his honour. Called 'ED@80', this international gathering of earth scientists at Novi Sad, co-led by Professor Slobodan Markovic, and including field trips to the loess deposits of northern Serbia, was a fitting recognition of Edward's contribution to the greater understanding of the physical and human significance of loess transportation and deposition.

Ed@80, a celebration of Edward's life and career, 2012

Later in 2012, Edward and Maryon made their final move, this time to Cheltenham, in southwestern England. Edward quickly installed their extensive library in their new home, as well as filing cabinets and shelves inhabited by academic papers and research documents. In his neatly defined and organised study, lined with photographs from around the world, he continued to write and edit scientific papers, in particular co-authoring papers on medical geology and the 'impact of airborne mineral dust on human health.' This was a continuation of initial work with thoracic specialists in China and Europe into the quality, composition, distribution and properties of loess and global silt and their profound societal relevance, a parallel project which had resulted in the publication of three co-authored books: 'Essentials of Medical Geology' (2005); 'Pollutants, human health and the environment: a risk based approach' (2012)'; and 'Essentials of Medical Geology' (2013).

One final move within Cheltenham in 2015, to a smaller house, did not dim Edward's work ethic, and it was here, in 2017, at the age of 85, that his last paper of more than 200 manuscripts and books, concerning the human health impacts of wind-blown Saharan dust particles, was written. This followed titles such as, 'Geomorphology and Climate' (1976), 'Landslides in the Thick Loess Terrain of North-West China' (2000) and 'Geomorphological Processes' (2013). Contributions to international journals and memoranda of collaboration with geoscientists and others too many to mention lay, meticulously archived, in Edward's last, sunshine-filled study. At last, now, Edward began to slow down as dementia and a diagnosis of Alzheimer's disease started to take their toll. Maryon was, as she had always been, the mainstay of Edward's work, health and happiness, and life was adjusted to include cruises around the Mediterranean and northward past the Arctic Circle, revisiting old haunts. Language became increasingly sparse, though the twinkle in Edward's eye remained, as did his occasionally sharp wit. His love of literature, and especially Shakespeare, brought immense comfort; he was thrilled to win an award with a national bookseller for his satirical poem 'The Duntisbourne Leer,' based upon a pun around this Gloucestershire village's name. Edward was always tickled pink by wordplay, and it was therefore fitting that his poems were professionally performed during a tour of regional venues in 2021-2022. Visits to the opera and classical concerts also provided balm. A near fatal meeting with Covid-19 on Christmas Day, 2022 led to Edward's move into Wentworth Court Care Home, where he continued to delight with the odd incisive remark, an eyebrow-raising rendition of the word 'Wow!', endless smiles, and dances with the carers, until his health finally failed.

Edward and Maryon at home in Cheltenham, 2024

Professor Edward Derbyshire died on July 9th, 2024, at Wentworth Court, Cheltenham, and is survived by his wife, Maryon. They shared three children, Edmund, Edward and Dominic, nine grandchildren, Lizzie, Emily, Frederick, Isaac, Ralph, Daniel, Jacob, Henry and Beatrice, and two great-grandchildren, Sophie and Martha.

Edward, Maryon and sons Edmund, Dominic, and Edward (left to right) at a professional performance of 'From Age to Age,' including Edward's poetry, Syde Manor, 2021

Written by Edward Derbyshire. Cheltenham, July 2024

Not a whit, we defy augury. There’s a special providence in the fall of a sparrow. If it be now, ’tis not to come; if it be not to come, it will be now; if it be not now, yet it will come.

The readiness is all.

William Shakespeare, *Hamlet*