

John Krebs had science in his blood, the son of a Nobel-prize winning professor of biochemistry, Hans Krebs. Krebs junior had an early passion for nature – hand-rearing birds in the family home and allowing these to fly freely round the breakfast room at family meals – perhaps kindling his later interests in food standards and nutritional risks. He also liked art, and fancied archaeology, but his Dad wanted him to be a scientist like him. He went to the local grammar school after passing his 11-plus, and there excelled in many subjects – though not in sciences. He blames some of this on his then teachers –nick-named Slosh the chemist, Pongo the physics master and Spud the biology teacher. Happily for John, though not for Spud – the latter fell ill and was replaced by a charismatic new graduate teacher – Mash (this was his real name, no nick-name presumably necessary given the juxtaposition with Spud). Bob Mash introduced John’s class to ethology and the works of Tinbergen – this was wholly irrelevant to the A-level syllabus, but hugely influenced John’s subsequent career. His Dad helped there too – arranging for John to spend summers working as a technician in the laboratory of another Nobel Laureate, Konrad Lorenz– how cool was that!

John failed to get into Oxford to read Medicine, much to his Dad’s chagrin, though this failure was quite understandable given his confession at interview that he had absolutely no interest in medicine. A year later he went up to Oxford to read Zoology. He says he was “awestruck to be taught by the people who had written the literature they were teaching”, and, presumably, so his own students later were awestruck to be taught by him - that is the wonder of research-led teaching. His own dedication to research-led teaching is evident in his later co-authorship with Nick Davies of Cambridge of 'An Introduction to Behavioural Ecology' a very influential undergraduate text in the early days of that subject. Indeed in John’s view this textbook has influenced more people than any individual research paper he

has written. It has gone through 4 editions since the first in 1981 - the most recent one just out this year. At a higher level, and with Nick again, at about the same time he also edited the influential 'Behavioural Ecology: An Evolutionary Approach' (though what other approach there could be is a puzzle!), which had 4 editions, with largely new chapters in each edition, that reflected the discipline at the time but was also important in pushing it on.

John's PhD in Oxford was a slim volume on territory in the Great tit, supervised by Mike Cullen, answering - by elegant field experiments - some long-standing questions about the function of bird breeding territories. His external examiner was John Crook, a pioneer of behavioural ecology who died last year; John Krebs was a great admirer of his. John then spent a brief but stimulating period at the University of British Columbia, where he conducted more of the field work which for him has always been the most enjoyable kind of research. He speaks enthusiastically of the work he did on group feeding on great blue herons in Vancouver, with the gorgeous view of Howe Sound as back-drop. After an even briefer, and for him less stimulating period in Bangor, he returned to a research post at Oxford in 1976, where he has remained despite forays to London and Swindon. He was a Royal Society Professor in Oxford from 1988-2005 and is currently Principal of Jesus College. The Zoology department at Oxford shares a building with Experimental Psychology, and this physical juxtaposition has helped foster the cross-fertilisation of ideas and the development of cunning experimental techniques. John conducted some of the earliest experiments testing optimal foraging theory in birds. One of his flocking and feeding lab experiments with tits involved 'trees' made of dowelling rods, and holding 'food sites' that were half ping-pong balls filled with sand, hiding meal worms. The link with neuroscience was immensely productive too, leading to some amazing discoveries. He describes the eureka moment when he and David Sherry suddenly realised that there was an association between food storing

behaviour in birds and the relative size of the hippocampus – a part of the brain essential for remembering. He remembers sitting with David staring at the brain sections in disbelief. Characteristically a year's hard work followed to demonstrate the robustness of this relationship and publish an immensely important contribution to our understanding of the neuroscience of memory.

By the early 1990s, John was successfully running a group in Oxford of about 30 including 10 post-docs with funding from the Natural Environment Research Council and the Agriculture and Food Research Council. His colleagues and students all speak fondly and favourably on him – and, unlike some more notoriously fiery contemporaries, remark that he was always impeccably dressed, well mannered and presenting a management style from which they all learned by his excellent example. His productivity was outstanding. In addition to the books there are over 300 scientific papers – and his willingness to teach and inspire the next generation of scientists was reflected in his delivery of the Royal Institution Christmas Lectures in 2005. By that time, though, he had moved from a full time academic role into research and public administration. Professor Krebs was appointed Chief Executive of the Natural Environment Research Council which he led from 1994-1999. He then served as first Chairman of the Food Standards Agency from 2000 to 2005, where he combined his animal behaviour expertise with psychological & sociological insights for a rounded view of food risks – insights he was pleased to share with us when he delivered a public lecture here in Newcastle a few years ago. He was appointed to the House of Lords as an independent crossbencher in 2007, where his particular areas of interest include environment, science, education and food. In 2007 he chaired a working party of the Nuffield Council on Bioethics to produce a report on the Ethics of Public Health. In 2009 he chaired an enquiry by the Science and Technology Select Committee into Nanotechnology and Food. His many

scientific and national contributions have been recognised in many honours, including election as a Fellow of the Royal Society in 1984, and he was knighted for services to behavioural ecology in 1999.

In Newcastle we have an excellent and thriving Centre for Behaviour and Evolution, also known as the Krebs Fan Club – with many colleagues who have been influenced directly or indirectly by John's work. Given these close connections, and in recognition for his own scientific creativity and discovery, and exemplary leadership and national administration, I invite you to bestow on Lord Krebs, the honorary degree of Doctor of Science *honoris causa*.

Citation by Professor Vicki Bruce

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