

Article in The Guardian Tuesday April 10, 2001

#### Obituary for Michael Cullen, ethologist

Mike Cullen, who has died in a car crash in Australia aged 73, had an extraordinary influence on the development of ethology, the biological study of animal behaviour. He was of the generation of Oxford ethologists that included Robert Hinde, Aubrey Manning and Desmond Morris, and he was in many ways the unsung hero of that golden age in the subject. The impact of his razor-sharp, quantitative, analytical mind came not from his own research publications, which were modest in number, but from the difference he made to those who worked with him as doctoral students or colleagues.

Unusually, he was a scientist who put the development of others and of the subject as a whole ahead of his own career. All of us who worked with Mike can recall how he would take our half-baked ideas, inadequately analysed data, or the hesitant beginnings of a mathematical model, and transform them into a polished gem.

He would listen while eating his lunch from an old biscuit tin with a wire handle, one knee up, shoulders slightly hunched, rocking back and forth with absorption, hands fanned open and palms facing each other as if to grasp the issue under discussion. He would then rush off to a tutorial or lecture. But next day one would receive a handwritten letter with the solution to the problem, some lines of algebra, embellished by an apt - and untranslated - quotation from Catullus or a comic verse made up by Mike himself to suit the occasion.

Mike hardly ever accepted co-authorship of publications, but the acknowledgements sections of key papers published between the mid-1950s and 1980s show the breadth and depth of his influence, as do the career successes of his students. He was the kind of academic that would be pruned out in the contemporary, publish-or-perish, environment in universities. But if he had followed what is now the common practice of putting his name on all the papers of students and co-workers whom he had helped, he would have stood out as one of the most prolific ethologists of his time.

Mike was born in Bournemouth, but spent his first six years in India, where his father worked for the Bombay Company. Subsequently, together with his younger sister, he was brought up in England by a great aunt and educated at Marlborough College before going to Wadham College, Oxford, to read mathematics. He switched to zoology after the first year and graduated in 1952. His interest in natural history, and birds in particular, had been triggered in Kashmir in 1942.

A few years before Mike graduated, the Dutch ethologist Niko Tinbergen had moved to Oxford to set up the Animal Behaviour Group. Tinbergen is generally regarded, alongside Konrad Lorenz - with whom he shared a Nobel Prize in 1973 - as one of the founding fathers of ethology. Mike, with his interest in field biology, was naturally drawn to Tinbergen's group, and he completed his doctorate under Tinbergen on the behaviour of Arctic terns.

Tinbergen sent Mike and a Swiss student, Esther Sager, who worked on kittiwakes, together to the Farne Islands, off the coast of Northumberland. Perhaps unsurprisingly to their peers, Mike and Esther not only both came away with D Phil theses, but, in 1954, married and were to have two children. They stayed in Oxford, where Mike was Tinbergen's right-hand man from 1956 to 1969 in the Animal Behaviour Research Group, which was funded by Nature Conservancy.

Ethology at that time had been developing, under Tinbergen's influence, from largely observational studies of the behaviour of animals in their natural environment or in semi-natural captivity, into an experimental and quantitative discipline. Cullen's role in shaping this research agenda at Oxford was crucial: partly because of his mathematical facility - which Tinbergen almost totally lacked; but also because of his extraordinarily quick intelligence and his generosity in deploying it for the

benefit of others

Almost all the students who came through the Tinbergen group from the mid-1950s to the early 70s found their intellectual inspiration in Mike. To collaborate with him was exhilarating. Everything happened at high speed, using rapidly improvised equipment which cost nothing. Typical of his ingenuity was his method of plotting the three-dimensional coordinates of fish swimming in schools: simply photograph them in a bright shadow-casting light, and do the necessary trigonometry using the distance between each fish and its shadow.

When Tinbergen retired in 1974 from the chair in animal behaviour, Cullen, who in 1968 had become lecturer in psychology - and a fellow of Wadham - was seen by many as his natural successor. However, although his huge influence was acknowledged, his modest output of published research weighed against him.

In 1977, Mike accepted an offer from Monash University in Melbourne, where he remained until he retired in 1993. While there, he dedicated much effort to preserving the penguins of Phillip Island, on which he also did much research: he considered his victory in this battle to be one of his greatest achievements.

Sadly, Mike and Esther separated after their move to Australia, but Mike later found happiness with Rita Krishovski. Mike was a warm-hearted, humorous and extraordinarily generous colleague, with an insatiable appetite and youthful enthusiasm for research. He was also a brilliant lecturer, and a model of what an Oxford tutor should be. Though a very private person, he would provide a sympathetic shoulder and a strong arm when a student or colleague came to him with private difficulties.

Stories of his mild eccentricities abound: his party act of fire-eating; his habit of knitting in seminars to avoid wasting time with his hands; and taking binoculars to conferences, to scrutinise details of tables and graphs shown by speakers.

Partly as a result of his casual dress and athletic appearance, he always looked much younger than he was. In seminars he was a formidable sceptic and questioner: if you could get your research past those quizzical eyebrows, you had nothing to fear from any audience in the world. We have lost a much-loved mentor who taught us how teaching should be.

- Michael Cullen, ethologist, born December 14 1927; died March 23 2001