

Rothamsted Repository Download

G - Articles in popular magazines and other technical publications

Perry, R. N. 2008. *Charles Christopher Doncaster (1920-2008)*
[Obituary]. doi:10.1163/156854108786161472

The publisher's version can be accessed at:

- <https://dx.doi.org/10.1163/156854108786161472>

The output can be accessed at: <https://repository.rothamsted.ac.uk/item/8q283/charles-christopher-doncaster-1920-2008-obituary>.

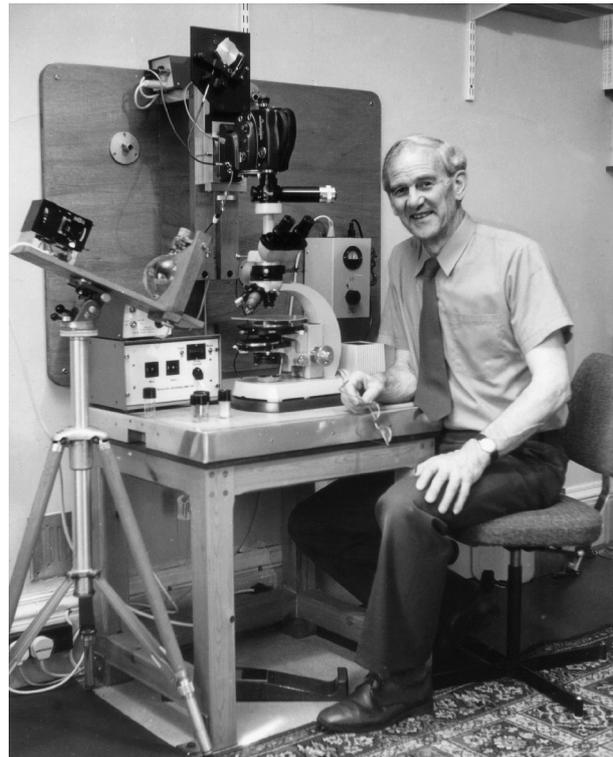
© Brill, 2008

Charles Christopher Doncaster (1920-2008)

Chris Doncaster, who died aged 87 on Tuesday 8th April 2008, was best known for his pioneering films on nematode behaviour and for producing the Doncaster dish, a circular, rotating, Perspex dish with concentric channels used for counting nematodes in a suspension.

Chris obtained his B.Sc. degree in Zoology at the University College of North Wales Bangor, in 1949, and the following year was appointed to Rothamsted Experimental Station (now Rothamsted Research). He remained at Rothamsted for his entire working life, attaining promotion to the career grade of Principal Scientific Officer in 1968 and retiring in 1981. He was elected Fellow of the Institute of Biology in 1980. Chris worked in an era when obtaining grants was not a requirement and supervising Ph.D. students was not seen as career enhancing. He was thus able to devote the majority of his time to laboratory work.

Chris was a careful, painstaking research scientist, who eschewed the temptations of multiple publications, preferring to produce fewer, more incisive contributions. His initial research remit was to examine aspects of host-parasite relationships. During this period he published papers on techniques for mounting nematodes and for setting up observation chambers to study nematode behaviour. In later years, nematode behaviour became the major focus of his research output, and his interest in photographic and film techniques enabled him to lead the field in using micro-cinematography to analyse various life processes of some of the more economically important species. He produced several ground-breaking films, including a detailed examination of hatching and invasion of *Globodera rostochiensis*, and a first demonstration of how nitrogen-fixing *Rhizobium* bacteria penetrate the root hairs of their legume hosts. These research films were later adopted by the British Universities' Film and Video Council and were useful not only as research contributions but also as university teaching aids. It is a measure of their lasting value that it is hoped that they will be digitised and available as learning tools for new generations of students. The appointment to Rothamsted of Malcolm Seymour opened a productive collaboration, resulting in several joint papers on nematode behaviour, including exploration and selection of invasion sites, and nutrient ingestion. Chris also collaborated with other scientists and his film 'Aphid-trapping potato plants', produced with



Charles Christopher Doncaster

Richard Gibson, was awarded a Diploma of Honour at the International Scientific Film Association Congress in Cologne, 1980.

It would be erroneous to remember Chris solely as a nematologist. He was first and foremost a naturalist, with a lifelong interest in wildlife of all sorts. Following graduation and before his appointment to Rothamsted, he joined a 6-month bird collecting expedition to Colombia with W. Ray Philipson of the London Natural History Museum. He was a dedicated ornithologist, and he published several short papers on birds. In later years, when gardening became difficult, Chris employed a gardener whose first job was to plant dandelions in the lawn to provide seed to attract birds. A flock of 60 goldfinches duly began using his garden!

Chris was an accomplished artist with a sharp eye for biological detail. Throughout his life he drew and painted wildlife to an exceptionally high standard. Even into his eighties he was working up sketches begun in his

teens. Some of his paintings of birds and country scenes were sold to benefit the British Naturalists' Association. A series of watercolours provided the basis for a set of greetings cards, the profits of which went to the BNA. The cards were accompanied by informative descriptions of the biology of the subject, which included marine organisms such as *Elutheria*, a six-armed hydroid medusa. In 2005 he was presented with the 'David Bellamy' Award, given annually by the BNA to a field naturalist of distinction.

Chris' appreciation of photography extended beyond laboratory-based work on nematodes, and he was made a Fellow of the Royal Photographic Society in 1961. His long-term observations of Atlantic grey seals on the Pembrokeshire coast led to him to make the film 'Children of the Storm', which was shown on both Survival Anglia TV and Channel 4. He provided numerous film clips for television documentaries including 'The World About Us', and a sequence on nematode-trapping fungi for David Attenborough's 'Private Life of Plants'.

Chris was a pleasant, helpful colleague who enjoyed discussing his work but especially delighted in conversations on the broader aspects of natural history. He took members of Rothamsted bird watching and on night forays to local badger setts. As a nematologist, he contributed greatly to our understanding of nematode behaviour, and his pioneering films stimulated research by several groups into film and photographic techniques for detailed analysis of nematode behaviour. Above all, Chris was a meticulous naturalist whose eye for detail and unfailing accuracy were the hallmarks of his character. He is fondly remembered by colleagues, friends and family.

Roland N. PERRY
Rothamsted Research
Harpenden
Herts AL5 2JQ, UK
e-mail: roland.perry@bbsrc.ac.uk