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THE UNIVERSITY OF DUBLIN

School of Natural Sciences

Darwin Seminar

Wednesday November 11th, 4 pm

Botany Lecture Theatre

Followed by a Reception at 5 pm in the Zoology Building Foyer: all welcome

The implications of eye evolution and the Cambrian explosion

Prof Andrew Parker

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The School of Natural Sciences, Trinity College Dublin is hosting a special seminar to commemorate 200 years since the birth of Charles Darwin.

Suddenly, and for no obvious reason, the range and variety of animals erupted around 520 million years ago. This was during the Cambrian period, and it represents life's 'big bang' - a subject about which Darwin was unaware. On a seemingly separate subject, but again one that troubled Darwin, the first animal to evolve vision was a Cambrian trilobite, around 521 million years ago. That trilobite had also evolved swimming capabilities and had become an active predator - in fact, the first active predator, with visual search capabilities. Its eyes and visual processing abilities had bestowed it a new level of sophistication. If the first eye is added to the geological timescale, the order of events becomes the introduction of vision, first, followed closely by the Cambrian explosion, second. Maybe this is more than mere coincidence.

Andrew Parker was born in England in 1967. He received his Ph.D. from Macquarie University in Sydney while working in marine biology for the Australian Museum. He became a Royal Society University Research Fellow at Oxford's Department of Zoology in 1999, and is an Ernest Cook Research Fellow of Somerville College, Oxford, an EP Abraham Senior Research Fellow of Green College, Oxford, and a Research Associate of the Australian Museum and University of Sydney. In 2006 he was appointed as a Research Leader at the Natural History Museum, London. He has published numerous scientific papers on topics as diverse as optics in nature, ostracod crustaceans, biomimetics and evolution, and is the author of In the Blink of an Eye: How Vision Kick-Started the Big Bang of Evolution, and Seven Deadly Colours (Simon and Schuster).