

## The Dr A.H. Heineken Prize for Environmental Sciences 2006

*The work of Professor Stuart L. Pimm presented by Professor Gert Jan F. van Heijst, Chairperson of the Jury of the Dr A.H. Heineken Prize for Environmental Sciences*

*Prize citation: for 'his research on species extinction and conservation'*

Professor Pimm,

The jury of the Dr A.H. Heineken Prize for Environmental Sciences has unanimously decided to award you the prize for 2006 for your research on species extinction and conservation. You are one of the leading and most influential biologists working in the field of biodiversity and its preservation, which is evident from the enviable number of times your name is quoted in publications of interest to us scientists, such as *New Scientist*, *Nature* and *Science*.

Even at an early stage in your career, you aroused controversy in your publication *Food Webs*, in which you explained that the extinction of species within an ecological system has repercussions for the preservation of other species in that system. Biodiversity consists overwhelmingly of organisms at the higher trophic levels. In the abundant group of insects, for example, over 95% have been found to be at the higher trophic levels, so that any loss at the lower trophic levels has very serious consequences for the higher, more specialised levels. In other words, if a species at the bottom of the food chain extincts, the repercussions are felt throughout the food web. It was you who coined the term 'food chain' and used it in scientific models that have gone on to inspire many scientists. You currently hold the Doris Duke Chair of Conservation Ecology at the Nicolas School of Environment and Earth Sciences of Duke University in Durham, North Carolina, USA.

Of all the achievements that have earned you renown in the scientific community, two have had a major influence on science and society. The first was the development of ecological theory and empirical analyses relating to the conservation of species; the second was your use of remote sensing to identify endangered species, thereby making it possible to protect and preserve them for future generations. In both cases, you use advanced technologies and facilities for the benefit of nature conservation.

It is often a pleasant feature of disciplines such as environmental sciences that they involve a lot of travel. And you do a lot of travelling. Your research takes you to the most important centres of biodiversity in the world, such as the almost impenetrable jungles of Madagascar and Brazil. But you also visit locations that at first sight appear less attractive from an ecological point of view, such as Hawaii. This mapping out of the major ecological links is characteristic of your plea for 'ecology on a global scale'.

Professor Pimm, you are not only a top scientist but also very active in society, a combination greatly appreciated by the jury. Your sense of responsibility as a scientist means you are well aware that the results of your research must reach the policy-makers. In order to achieve this, you make every effort to apply your research, thereby placing the preservation of biodiversity and nature conservation on the political agenda. In addition, you are also skilled at conveying the importance of preserving our environmental heritage to a wider audience, as you did in *The World According to Pimm - A Scientist Audits the Earth*, published in 2001. In this book – acting in the capacity of 'the investment banker of the global biological accounts' – you get your critical scientific message across under catchy headings such as

'Billions of Tons of Green Stuff', 'When Vegetation Rioted and Big Trees Were King' and 'Man Eats Planet! Two-Fifths Already Gone!' We are all looking forward to the film.

Professor Pimm, on behalf of the jury of the Dr A.H. Heineken Prize for Environmental Sciences, it is my pleasure to award you this prize.