

Professor Rick Shine

The evolutionary and ecological impacts of cane toads

Professor Rick Shine is a Fellow of the Australian Academy of Science and Professor in Evolutionary Biology at the University of Sydney. He has received many awards (E O Wilson Award; H S Fitch Award; Mueller Medal; Clarke Medal) for his major contributions to our understanding of the ecology and evolution of reptiles. He has become interested in invasive biology because of the arrival of feral cane toads at a site in the Northern Territory where he has a 20 year research project on the demography of tropical reptiles. The background information already accumulated on this site provides a unique opportunity to study the evolutionary and ecological impact of toads and the evolution of the toads themselves. Further information can be found at www.bio.usyd.edu.au

Traditionally, conservation problems can be seen as ecological issues, unfolding too rapidly for evolutionary processes to play any significant role. However, adaptation can happen very quickly under some circumstances, and the current invasion of cane toads through tropical Australia has produced some clear evolutionary effects. This talk will review recent evidence of rapid changes in the toads themselves as they adapt to Australian conditions and concurrent rapid responses by native fauna as they evolve to survive in the presence of these toxic invaders.