

Cane toads may spread beyond their 'natural' limits

The introduced cane toad, currently impacting Australia's northern ecosystems, may migrate further south than previously thought because of its ability to rapidly adapt to climatic conditions.

Mathematical modelling of future cane toad distribution carried out by Dr Ben Phillips and Professor Rick Shine from Sydney University's School of Biological Science, with researchers from Yale University, indicated that cane toads will be able to live and breed in large areas of Western Australia (including Perth), South Australia (including Adelaide) and western Victoria, as well as in several pockets along the New South Wales coast.

'Previous predictions of toad distribution in Australia were based mostly on the range of

climatic conditions where toads live in their native range in Central and South America,' says Professor Shine.

'The toads have adapted rapidly to Australian conditions, and now tolerate much higher temperatures than was the case when they first arrived on our shores in 1935.

'As a result, toads have managed to spread much further, into climatic zones also found widely through southern Australia – so there is no reason to think they will remain only in the tropics.'

Most of the potential range of the cane toad in southern Australia is separated from the toad's tropical range by large expanses of desert, too dry for a toad to cross. But, warns Professor Shine, cane toads are 'accomplished hitch-hikers,



Cane toads have adapted to hotter, drier conditions than their native home range and may also 'hitch-hike' across desert barriers.

CSIRO Science Image/Alex Hyatt

always willing to accept a free ride among rubbish or equipment in the back of a truck.'

'The sheer volume of traffic between tropical Australia and

the south – especially given the current mining boom in Western Australia – means that small warty hitch-hikers may even now be heading south.'

New Zealand to be carbon neutral by 2020

New Zealand's Prime Minister, Helen Clarke, has announced that New Zealand is aiming to be the first country to be carbon neutral by 2020, with zero net carbon emissions across all sectors.

The program will begin with six of the government's 34 agencies, which will be carbon neutral by 2012. The remainder are to have a carbon neutral strategy in place by that date.

Climate Change Minister, David Parker, says the government is in the process of developing a New Zealand protocol for measuring and reporting emissions that is consistent with international standards.

Emissions will be measured from the 2007 calendar year onwards. Calculations will take into account energy and transport use, and waste to landfill.

Minister Parker says government agencies will take the lead by reducing their carbon footprint through energy efficient building design; use of low-energy appliances; encouraging staff to turn off lights and equipment when not in use; more waste recycling; use of videoconferencing instead of travel where appropriate; and use of



New Zealand's large power generation companies are increasingly targeting wind power and other renewable sources to reduce greenhouse gas emissions. Meridian Energy

energy efficient vehicles in company fleets.

He says that once emissions have been reduced as much as is practicable, agencies will purchase forestry offsets to cover remaining emissions.

Soon after the government's announcement, a major New Zealand power company, Meridian Energy, announced it had become the first energy company in the

country to be certified as carbon neutral.

The company says it has reduced emissions and offset the remainder by purchasing carbon credits.

Another large New Zealand energy supplier, Contact Energy, has announced it will invest NZ\$2 billion in wind- and geothermal-power projects over the next five years.